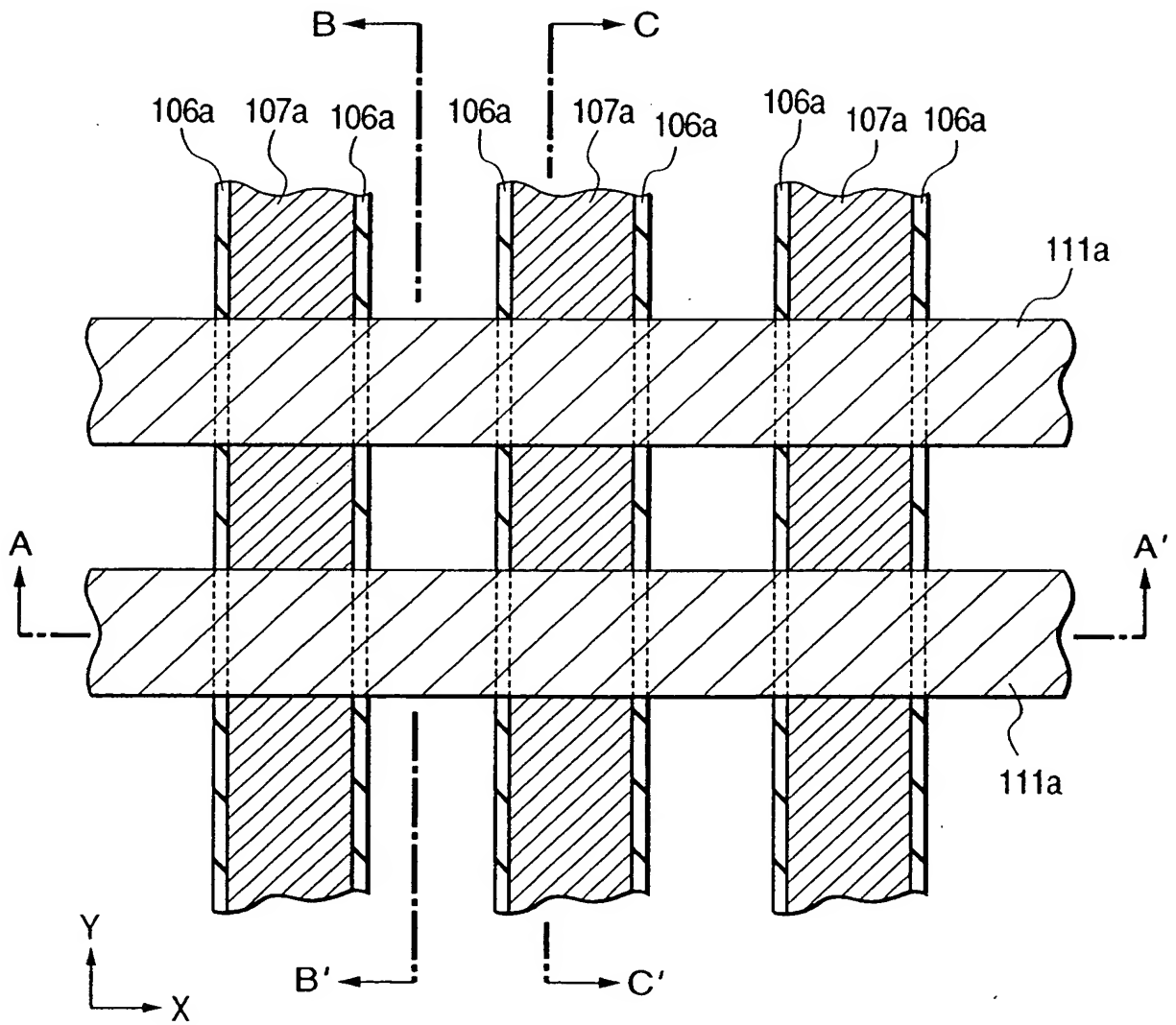


FIG. 1



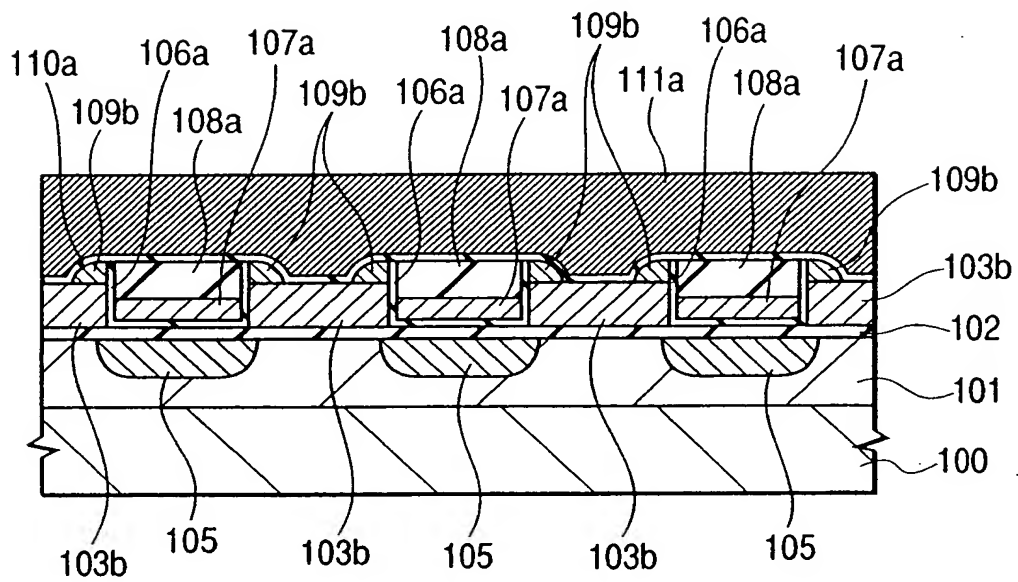
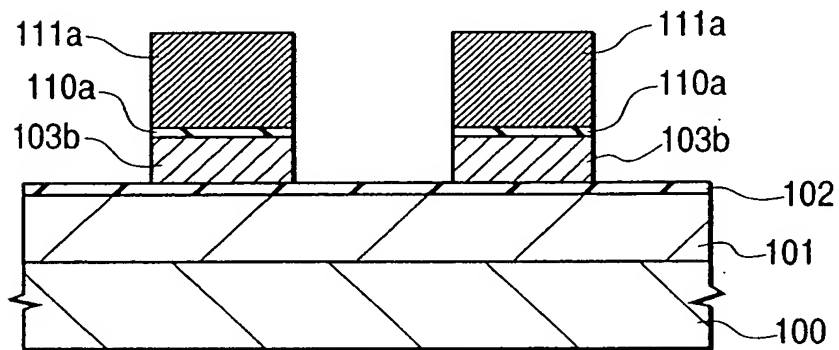
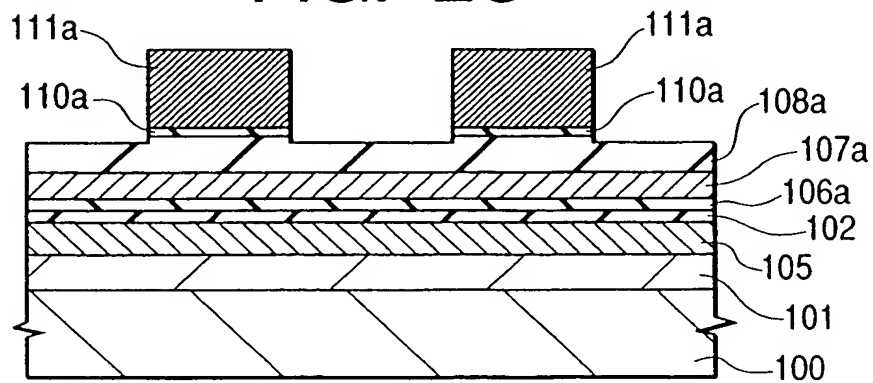
**FIG. 2A****FIG. 2B****FIG. 2C**

FIG. 3A

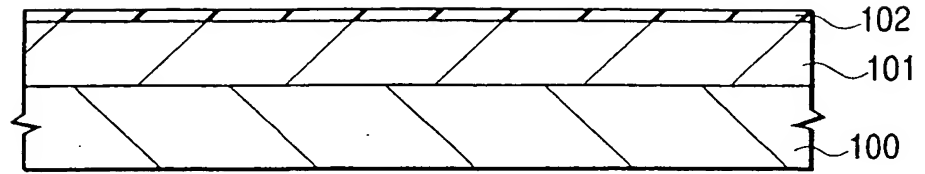


FIG. 3B

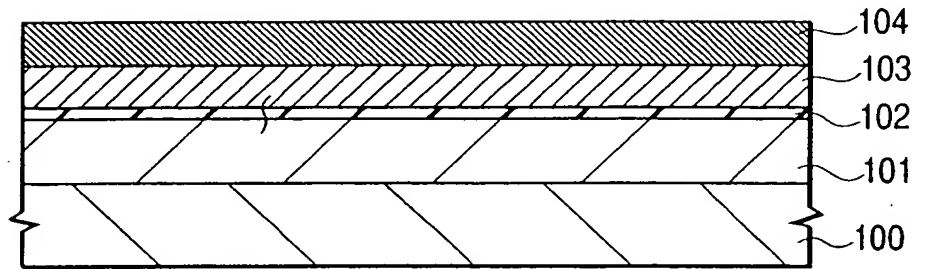


FIG. 3C

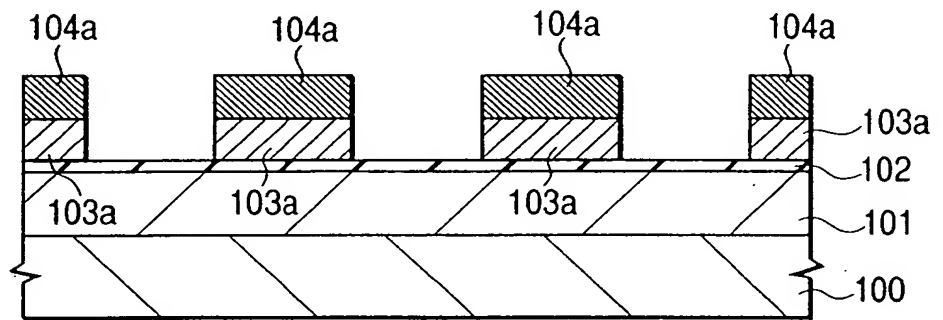


FIG. 3D

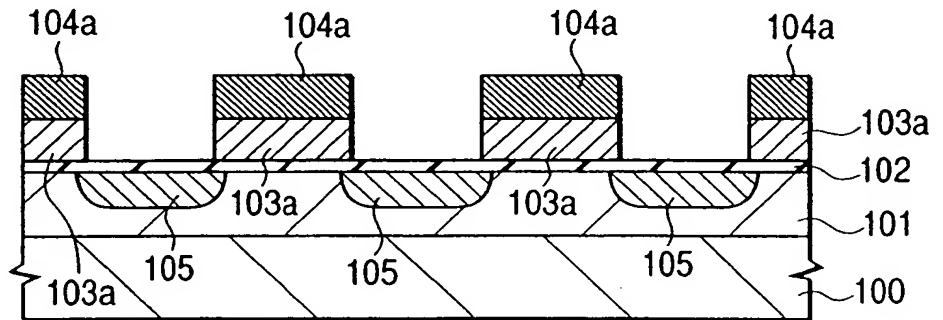


FIG. 3E

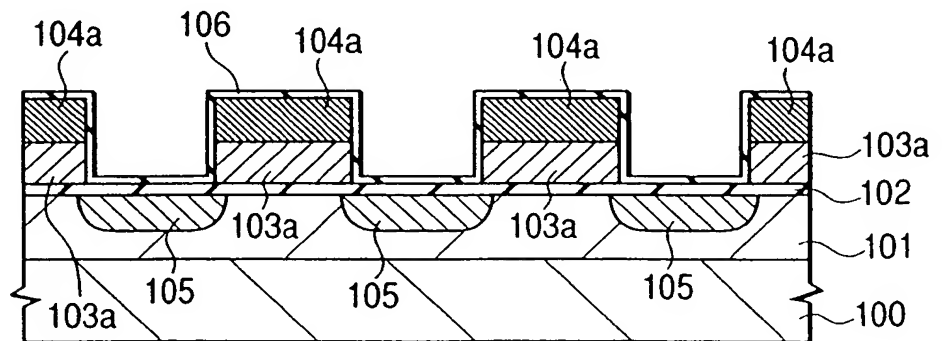


FIG. 4A

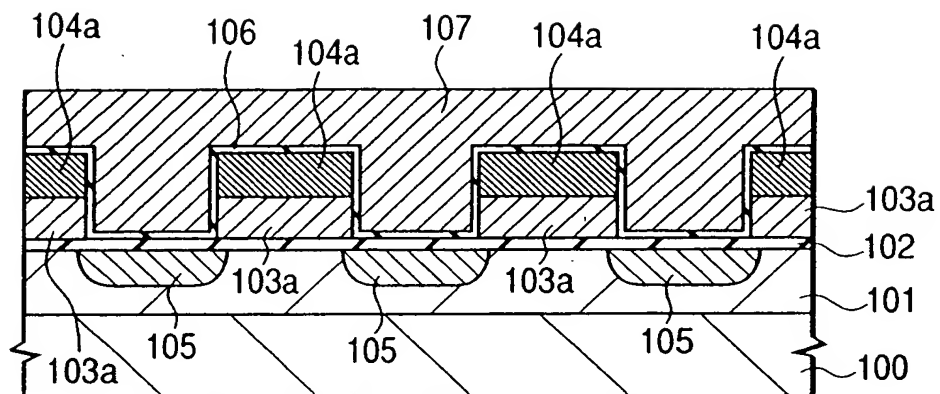


FIG. 4B

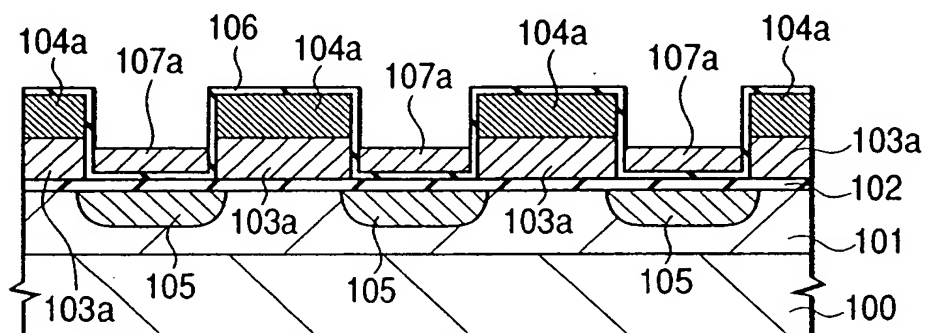


FIG. 4C

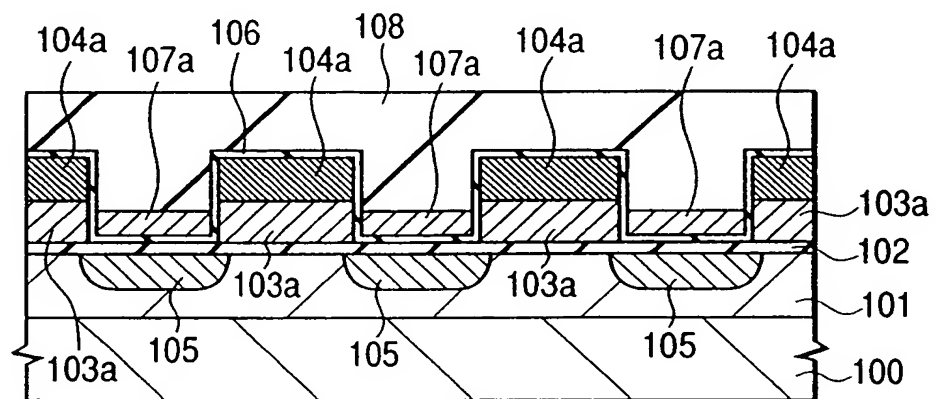


FIG. 4D

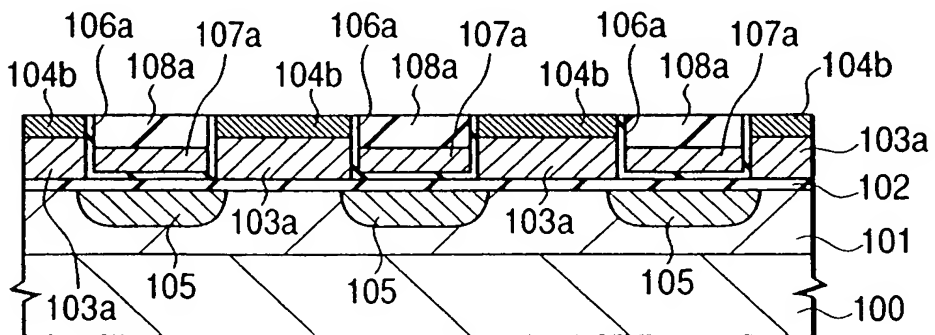


FIG. 5A

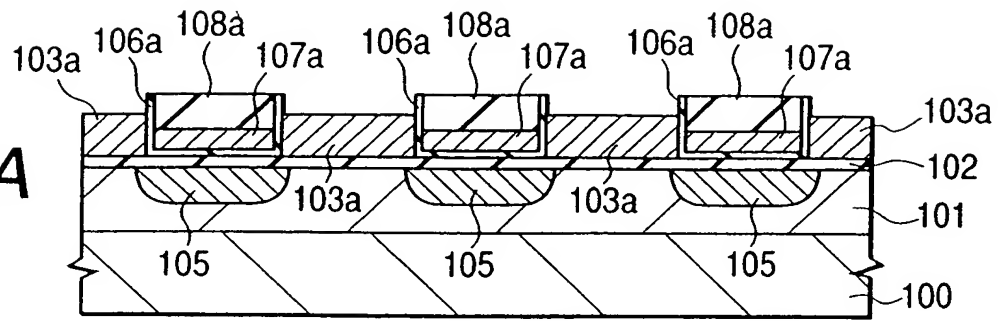


FIG. 5B

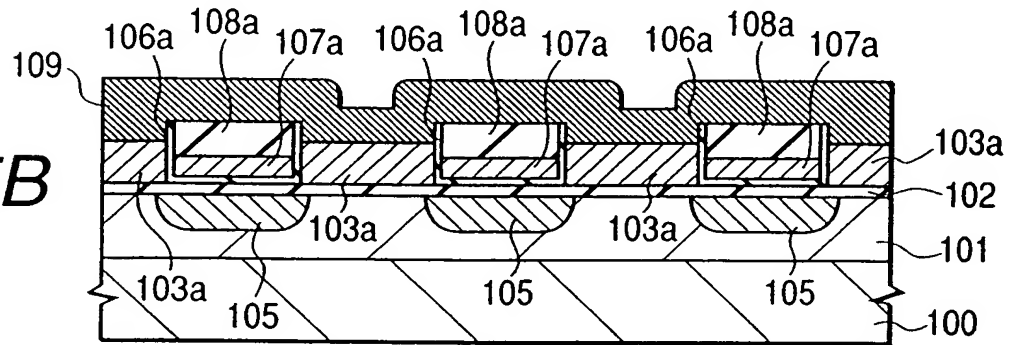


FIG. 5C

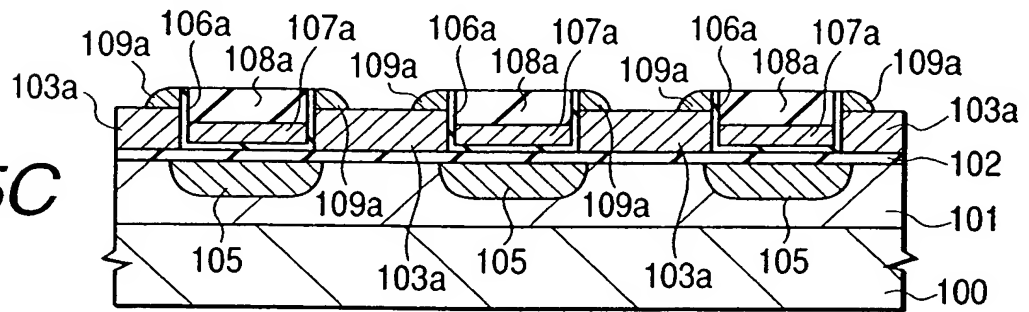


FIG. 5D

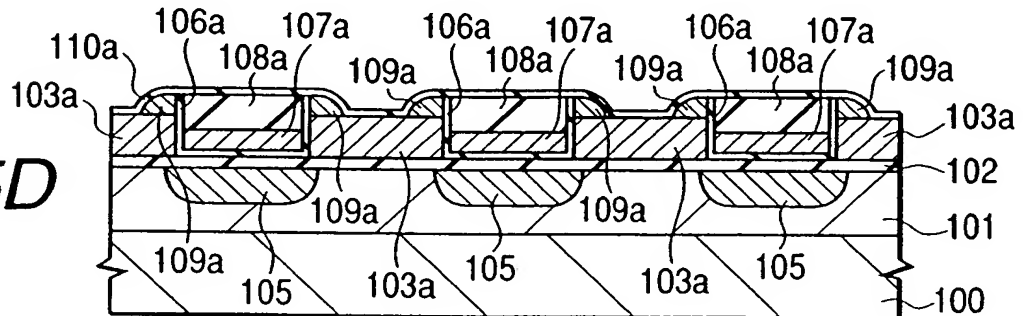


FIG. 5E

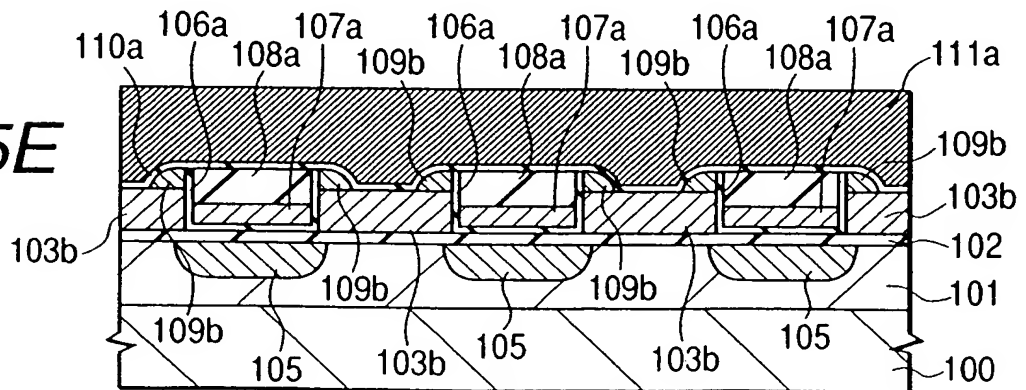


FIG. 6

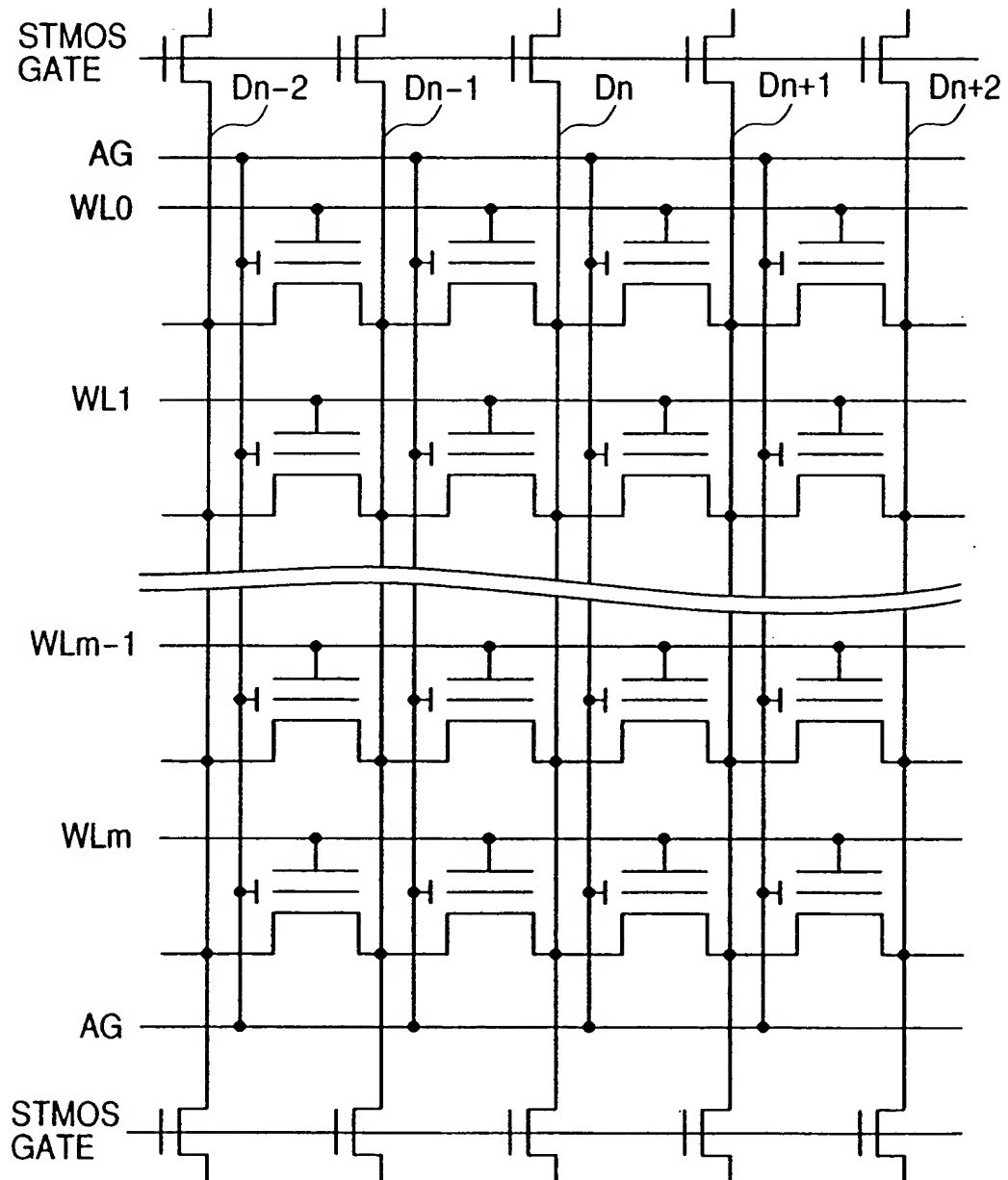
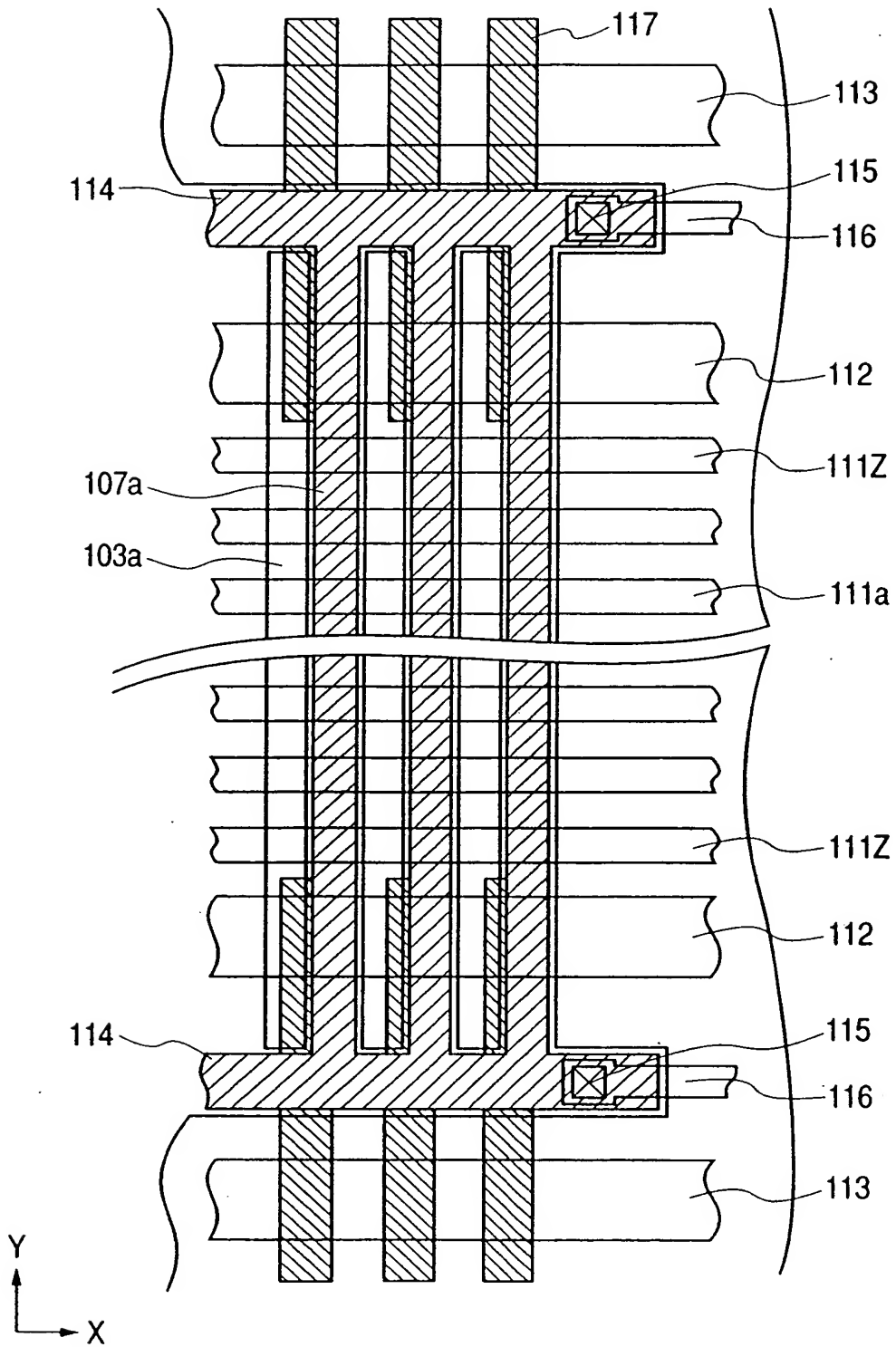
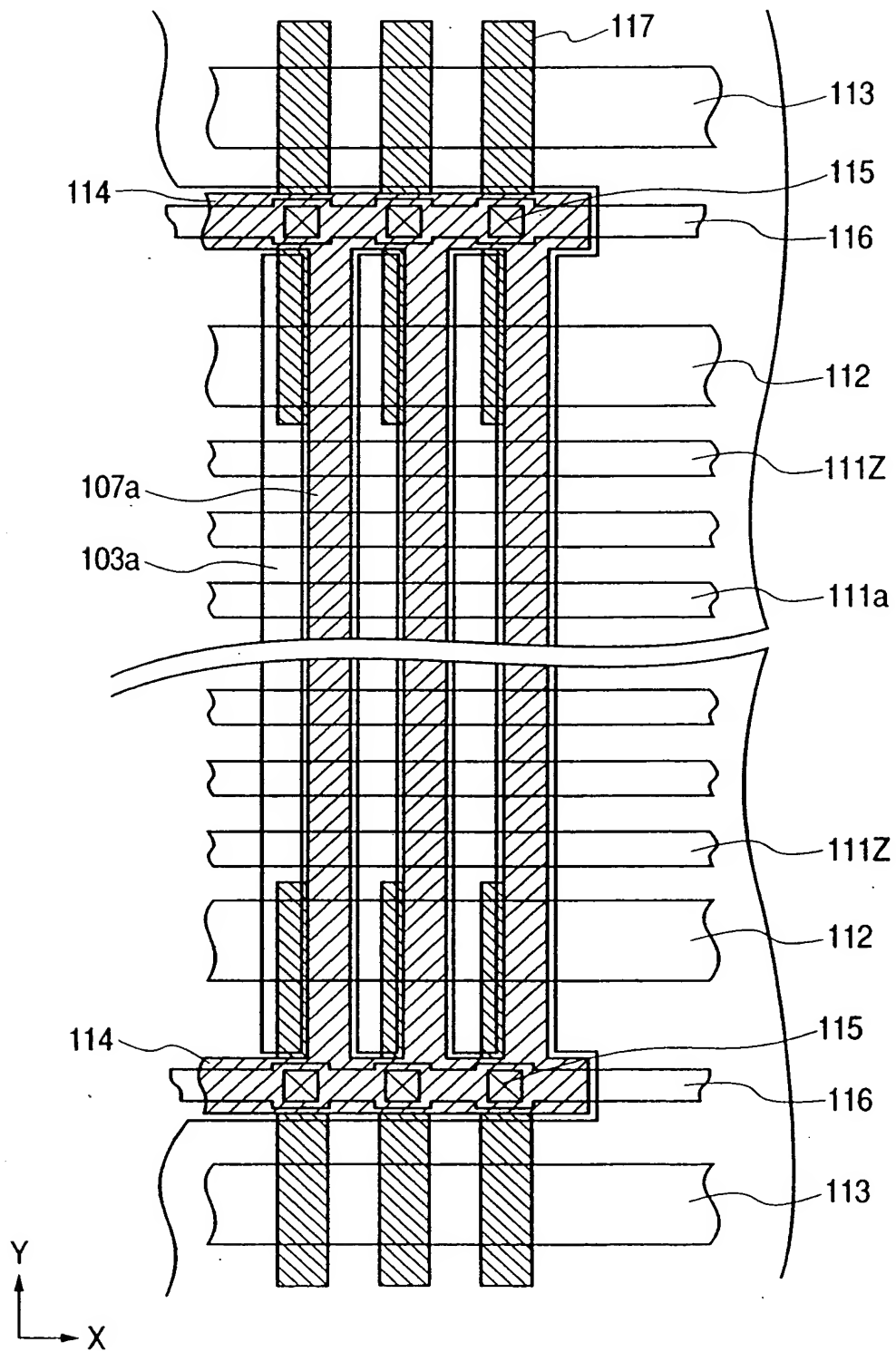
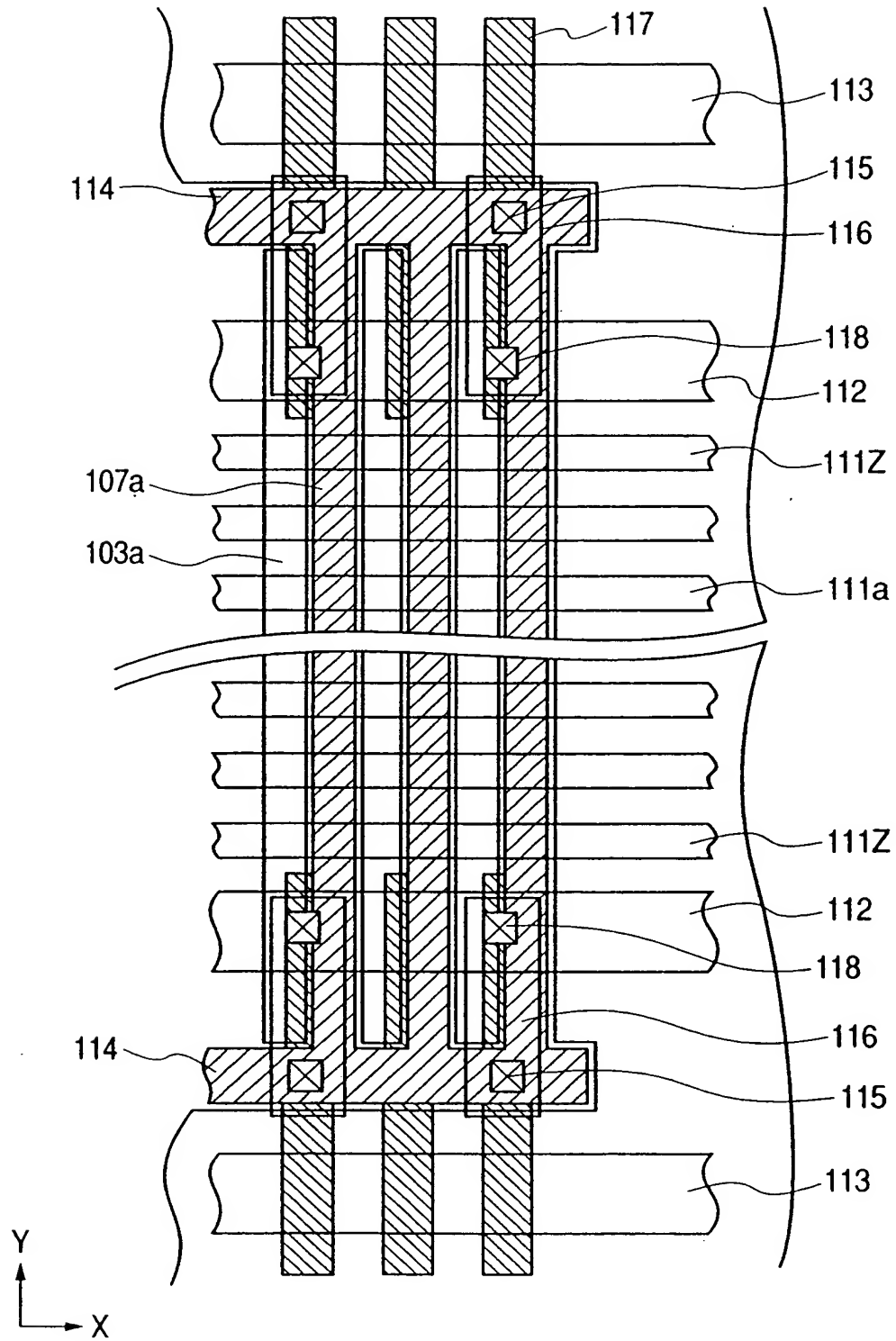


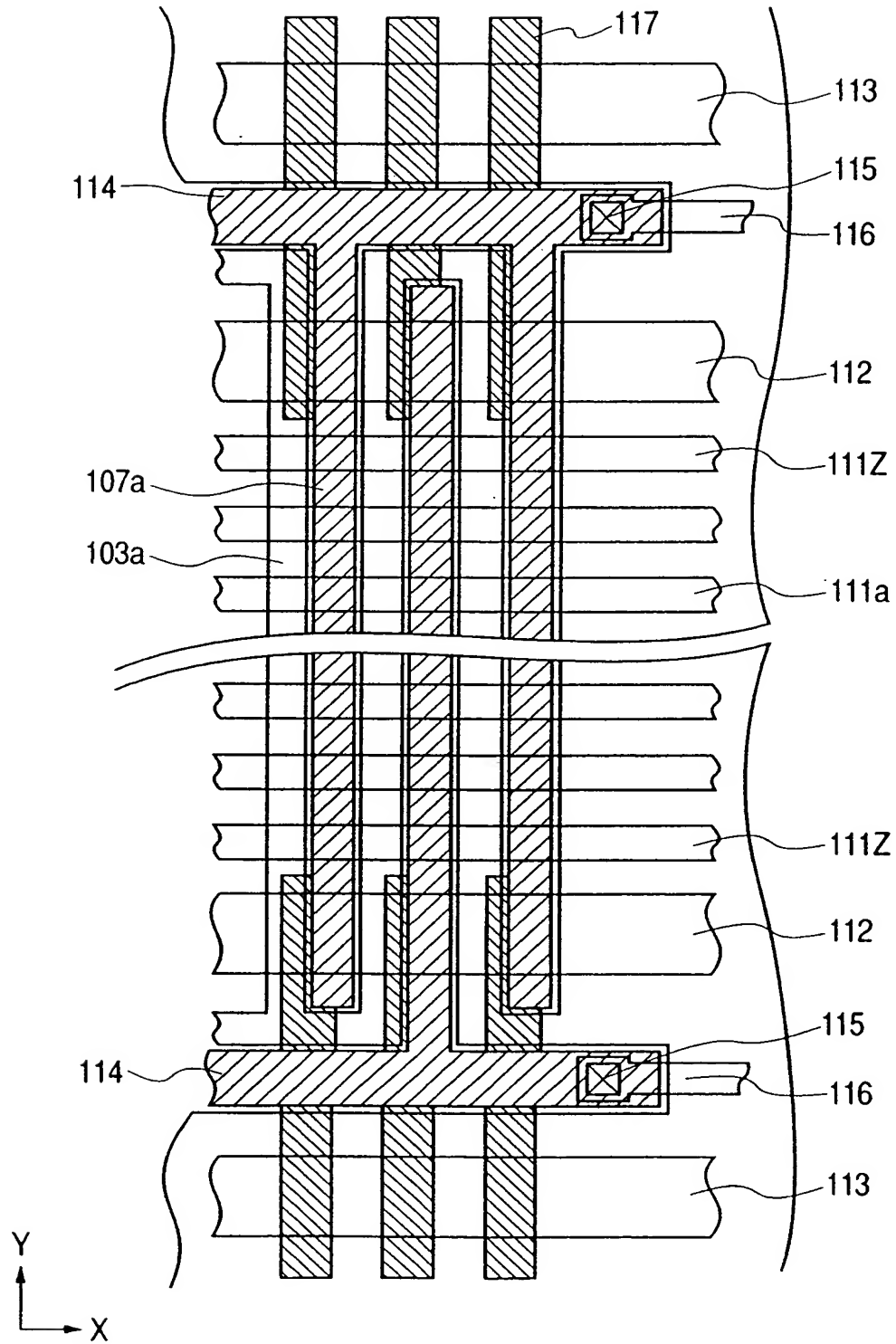
FIG. 7

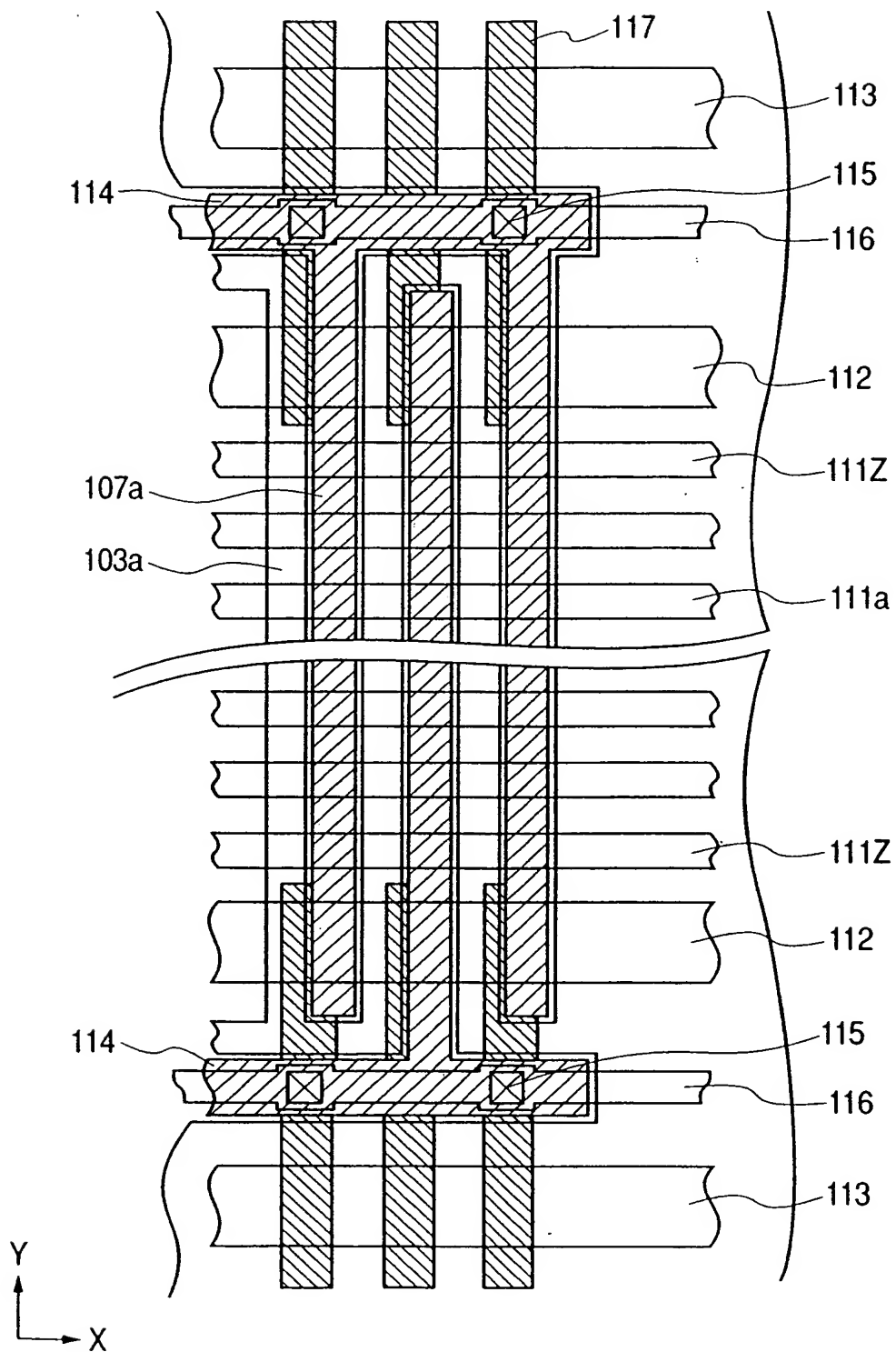


**FIG. 8**

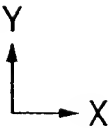


**FIG. 9**

**FIG. 10**

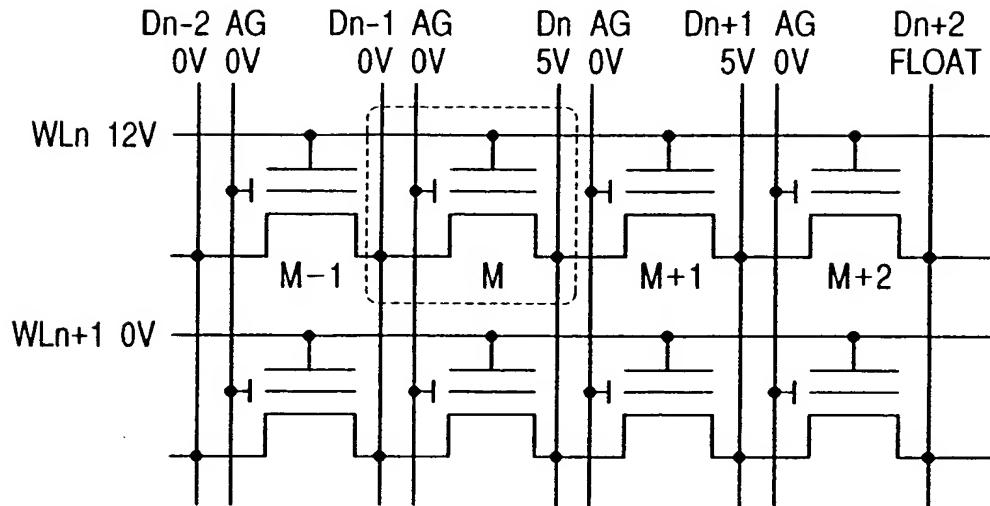
*FIG. 11*

**FIG. 12**

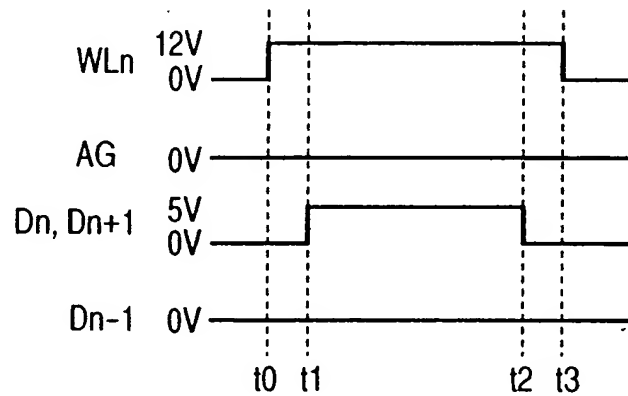


**FIG. 13A**

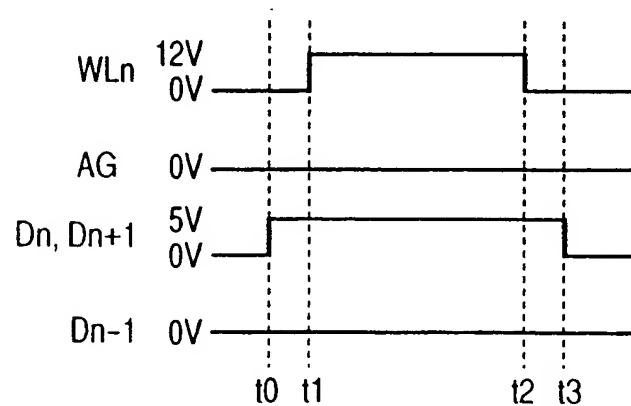
PROGRAM OPERATION VOLTAGE

**FIG. 13B**

TIMING 1

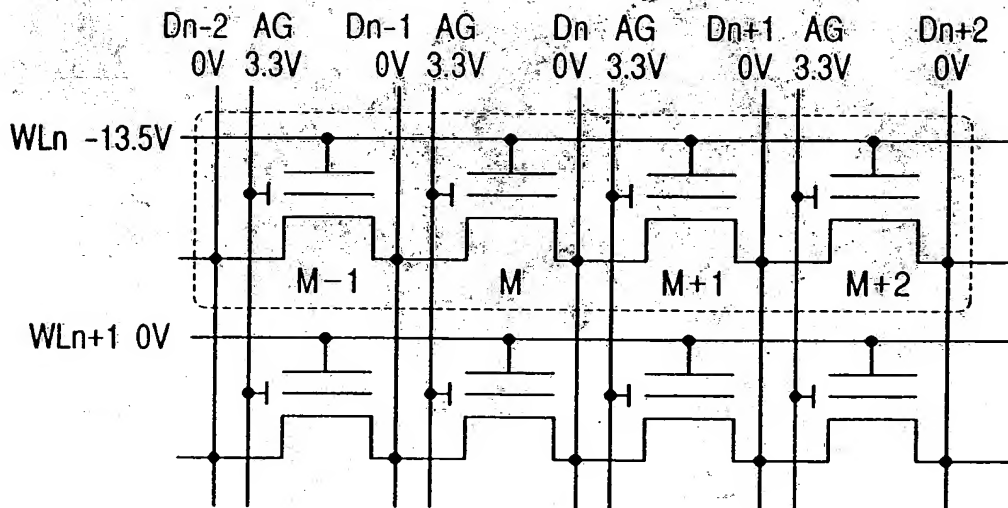
**FIG. 13C**

TIMING 2

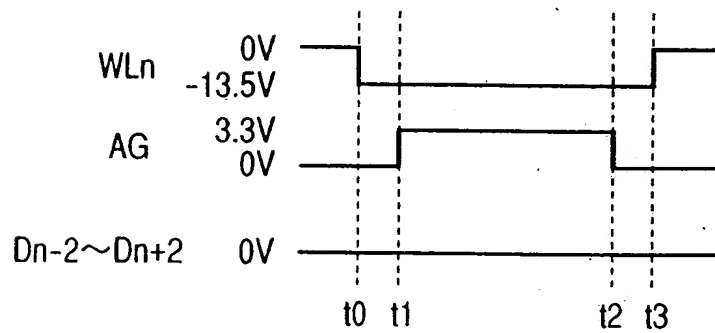


**FIG. 14A**

ERASE OPERATION VOLTAGE

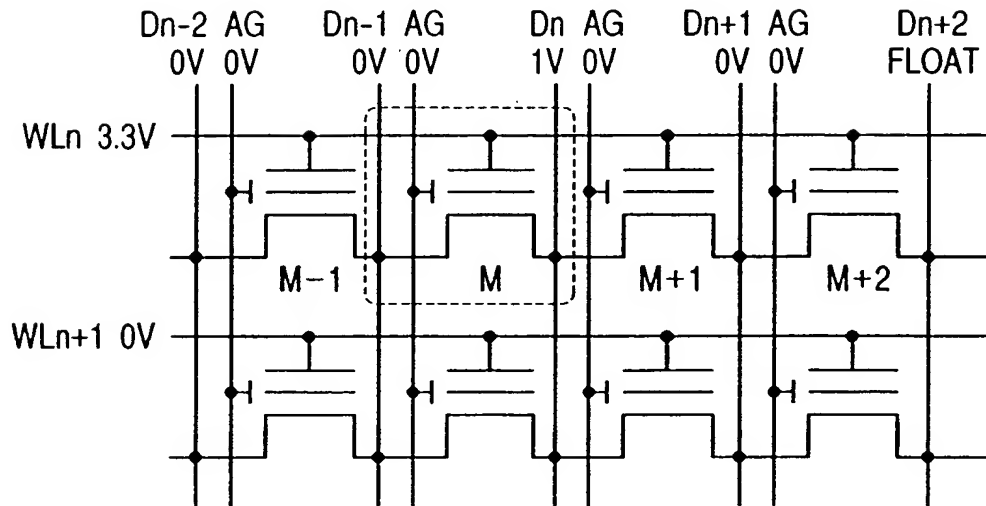
**FIG. 14B**

TIMING 1

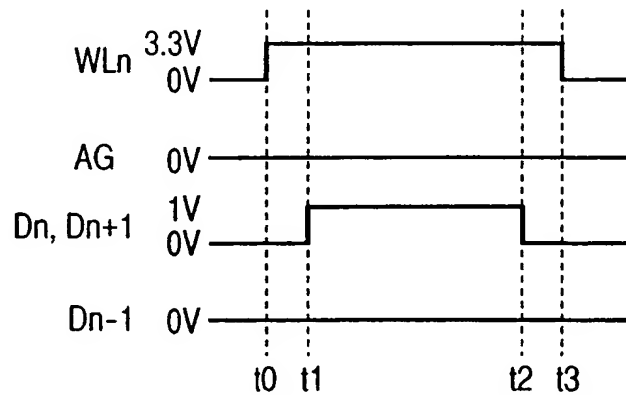


**FIG. 15A**

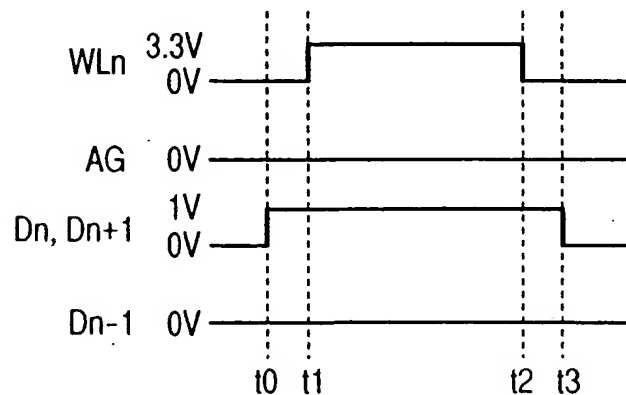
READ OPERATION VOLTAGE

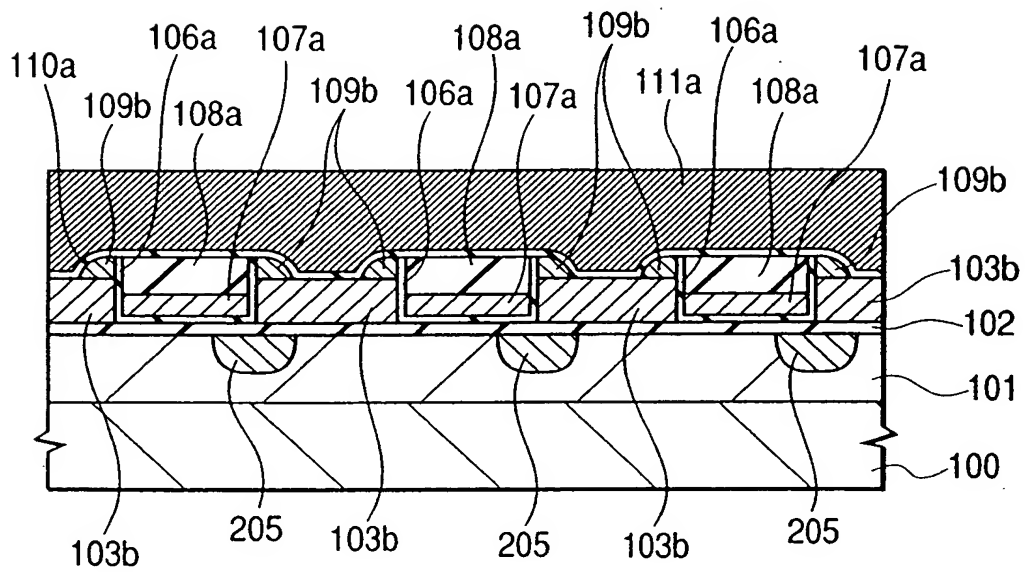
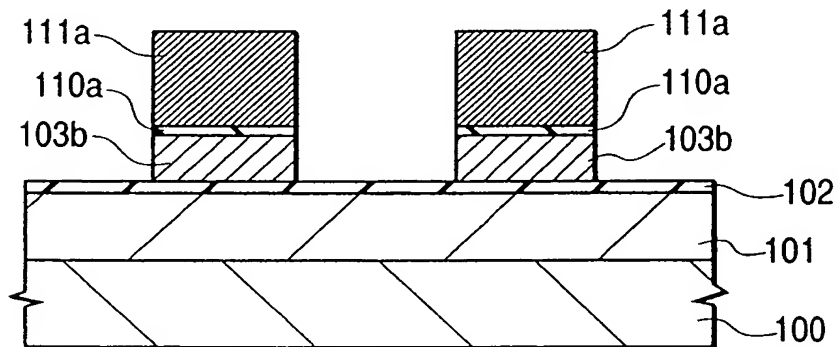
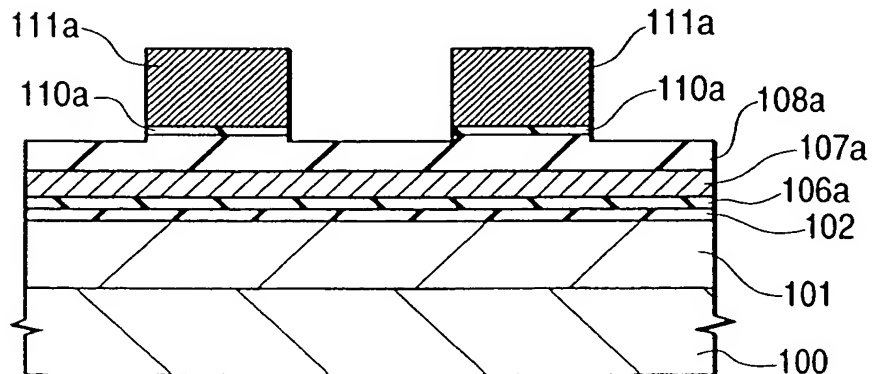
**FIG. 15B**

TIMING 1

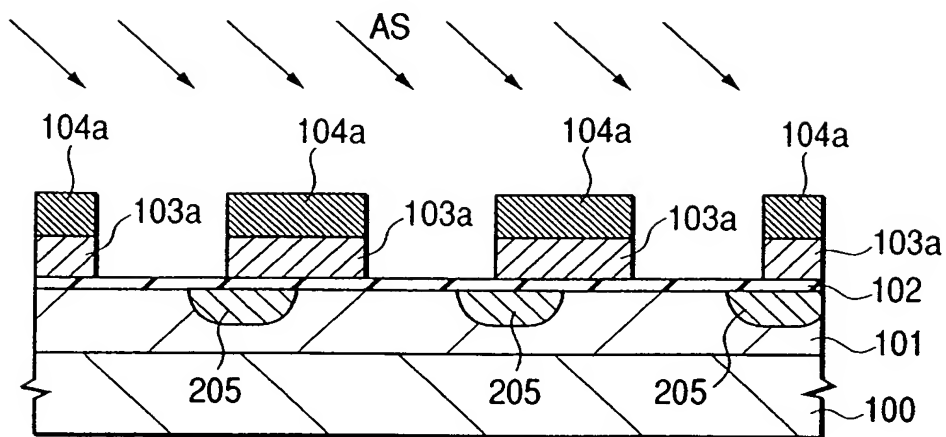
**FIG. 15C**

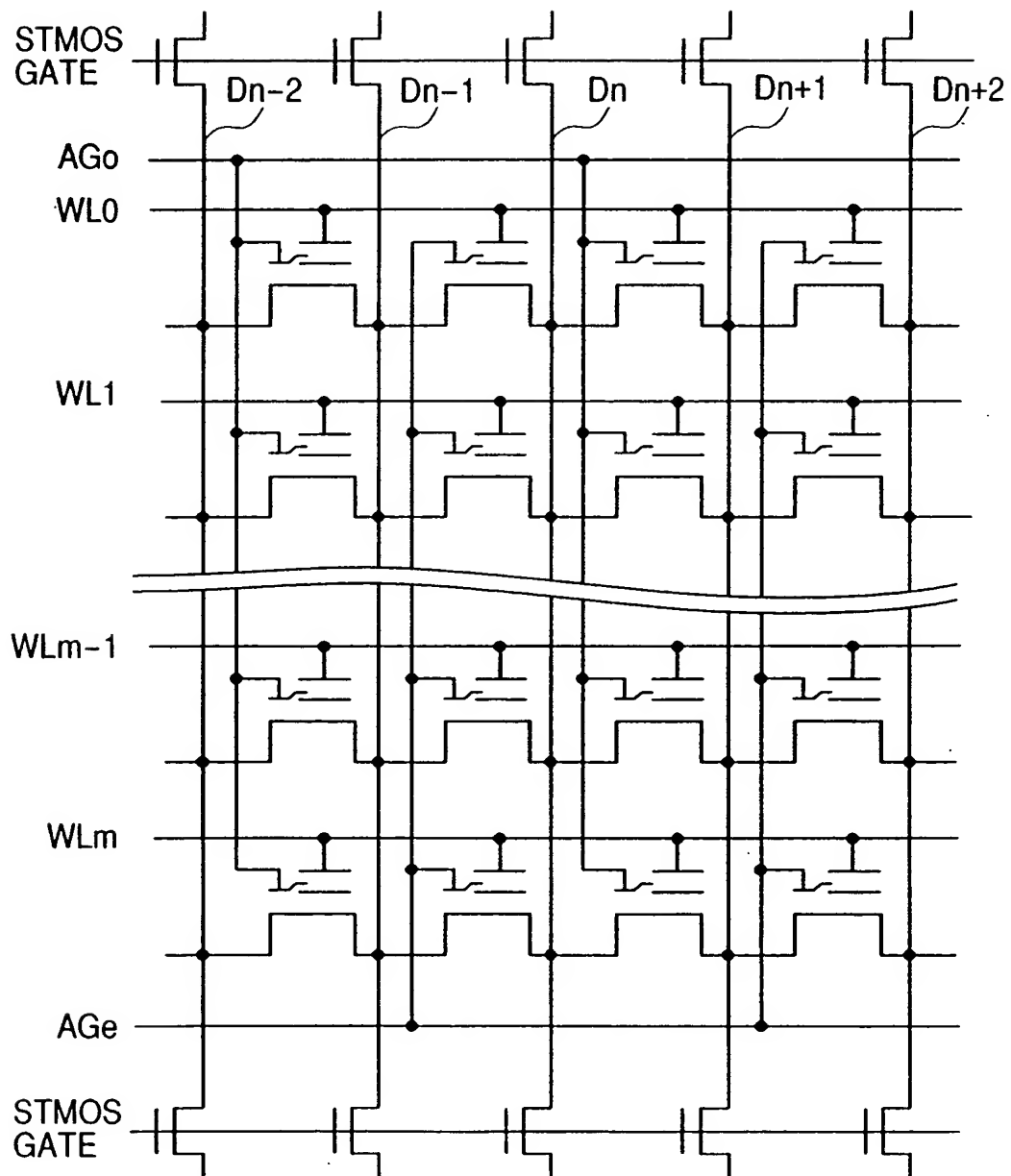
TIMING 2



*FIG. 16A**FIG. 16B**FIG. 16C*

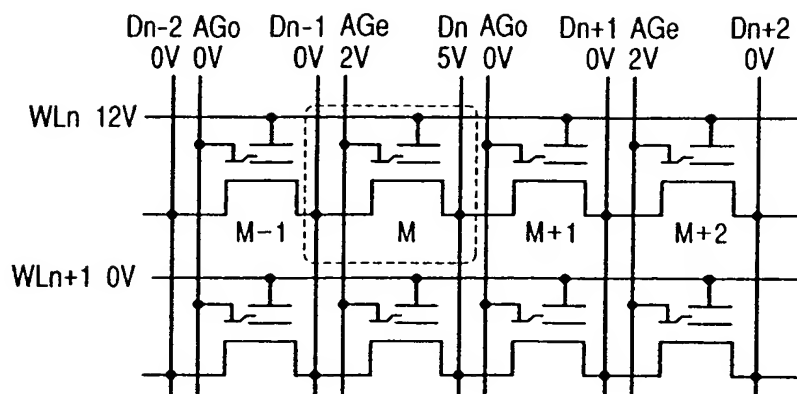


*FIG. 17*

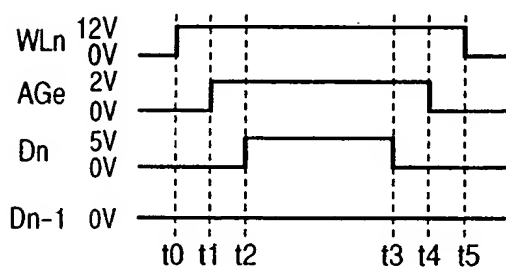
*FIG. 18*

**FIG. 19A**

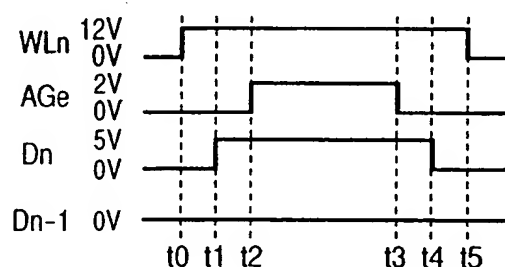
PROGRAM OPERATION VOLTAGE

**FIG. 19B**

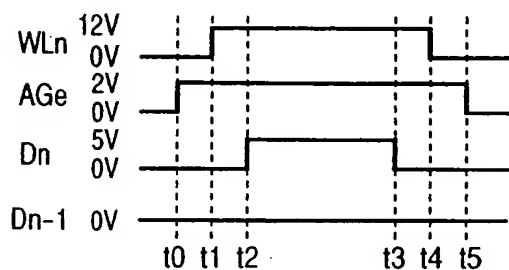
TIMING 1

**FIG. 19C**

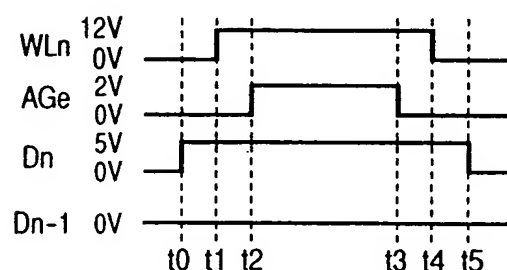
TIMING 2

**FIG. 19D**

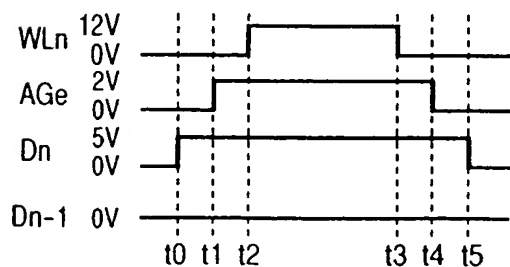
TIMING 3

**FIG. 19E**

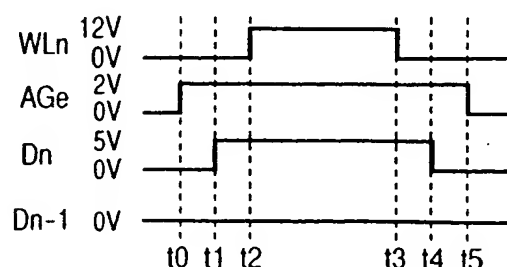
TIMING 4

**FIG. 19F**

TIMING 5

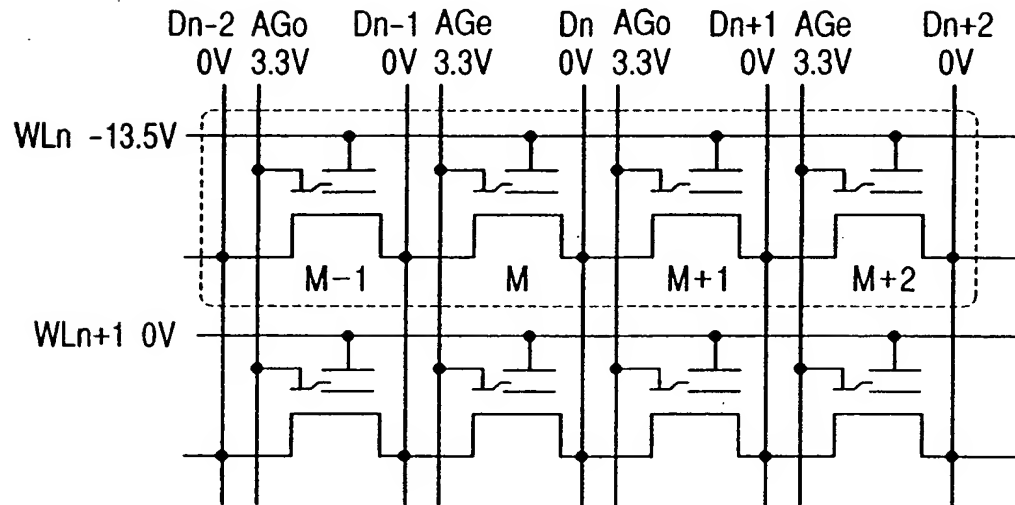
**FIG. 19G**

TIMING 6

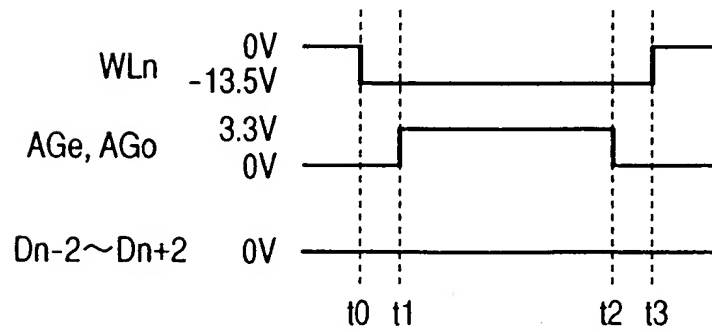


**FIG. 20A**

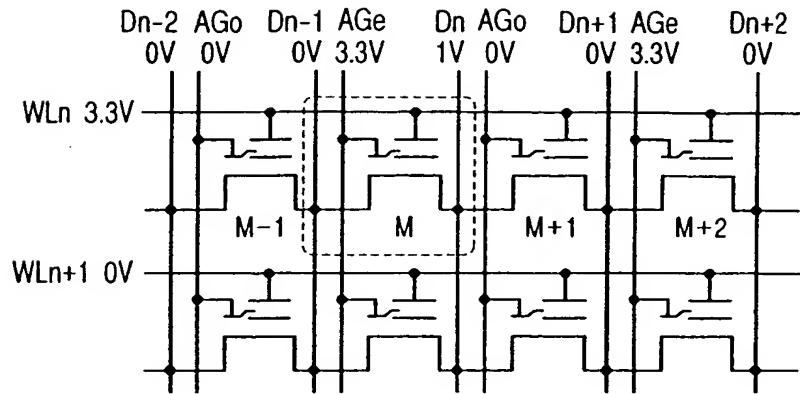
ERASE OPERATION VOLTAGE

**FIG. 20B**

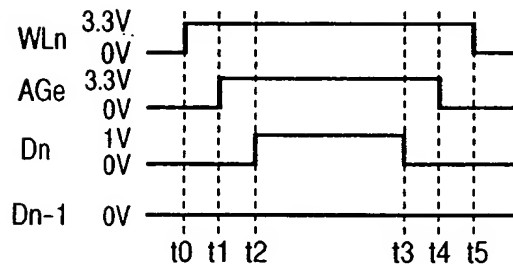
TIMING 1



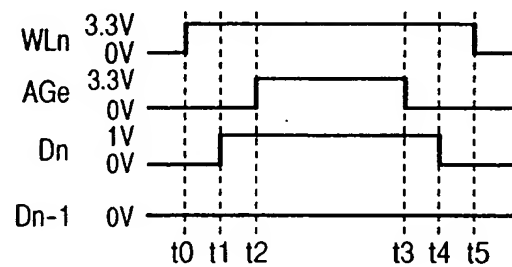
**FIG. 21A**  
READ OPERATION VOLTAGE



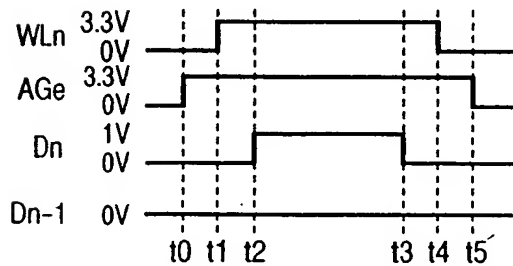
**FIG. 21B**  
TIMING 1



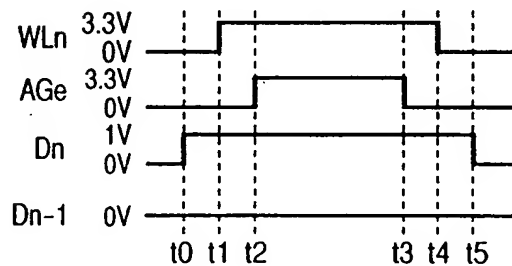
**FIG. 21C**  
TIMING 2



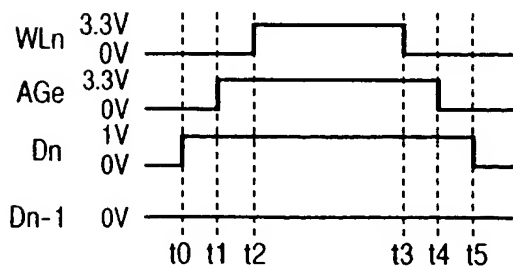
**FIG. 21D**  
TIMING 3



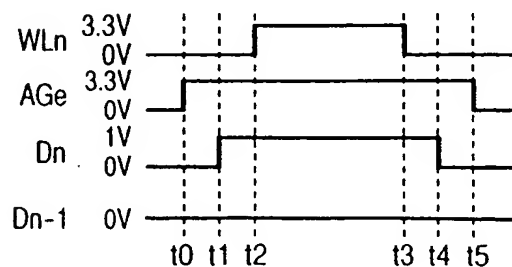
**FIG. 21E**  
TIMING 4

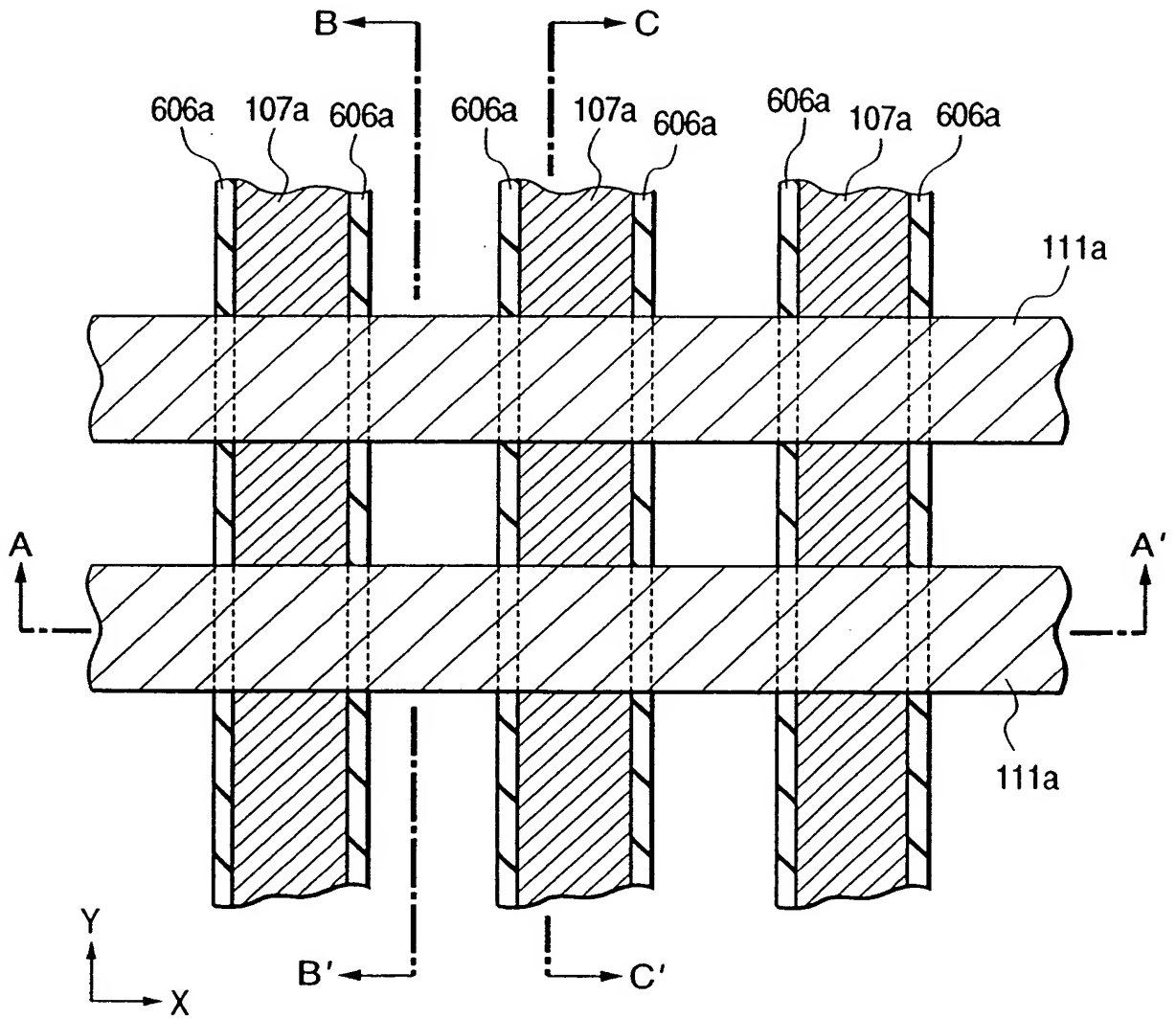


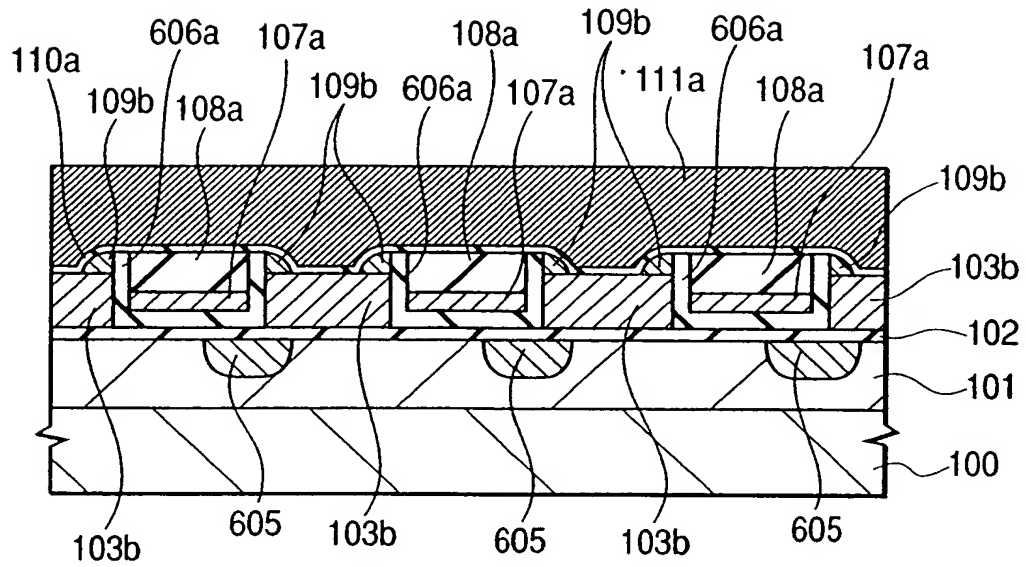
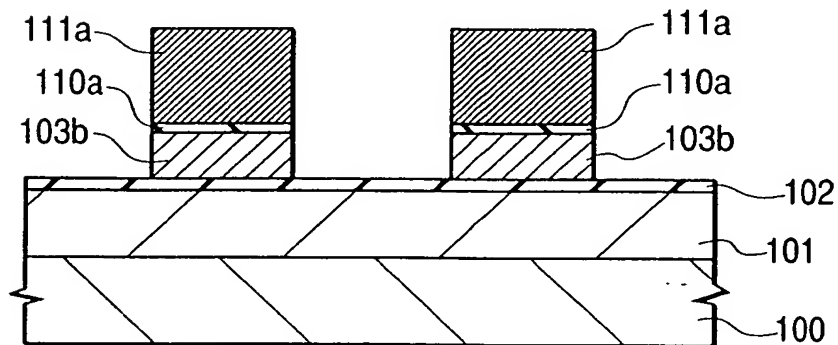
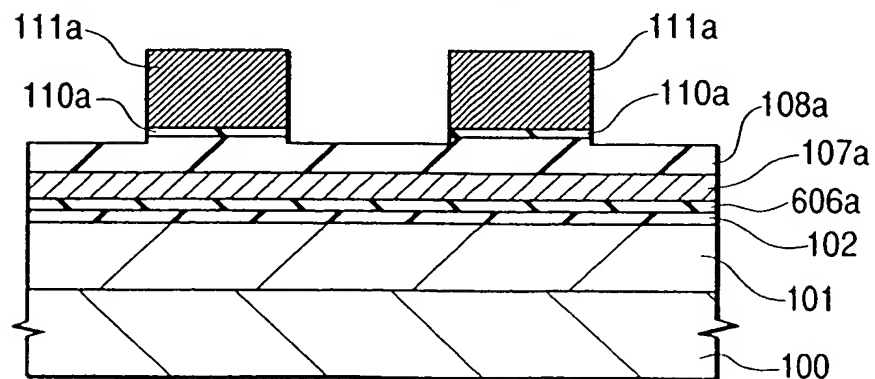
**FIG. 21F**  
TIMING 5

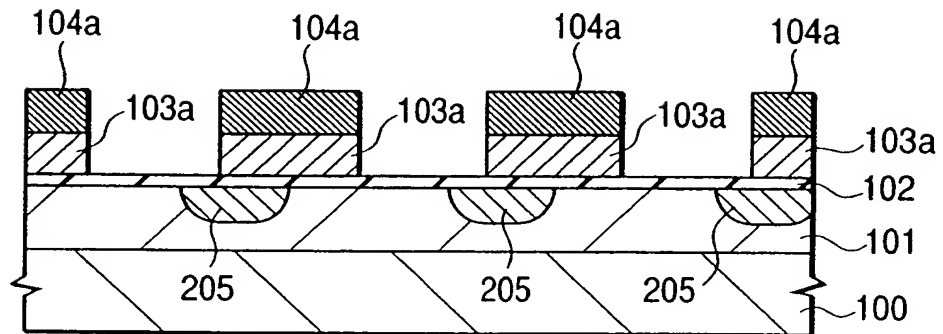
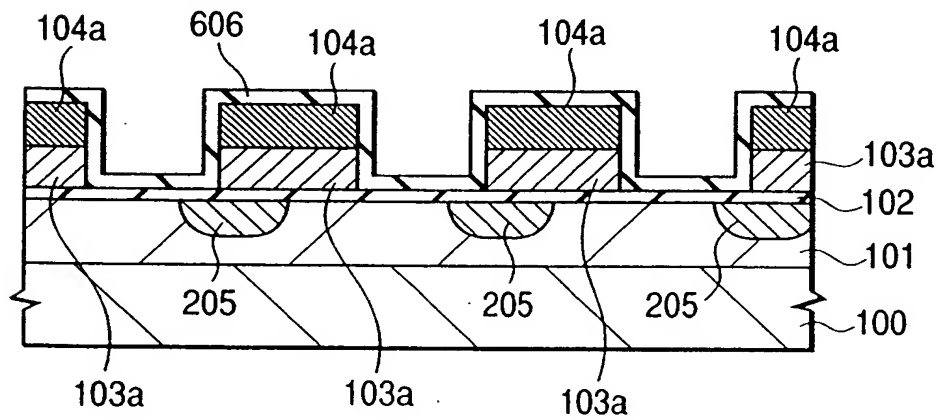


**FIG. 21G**  
TIMING 6

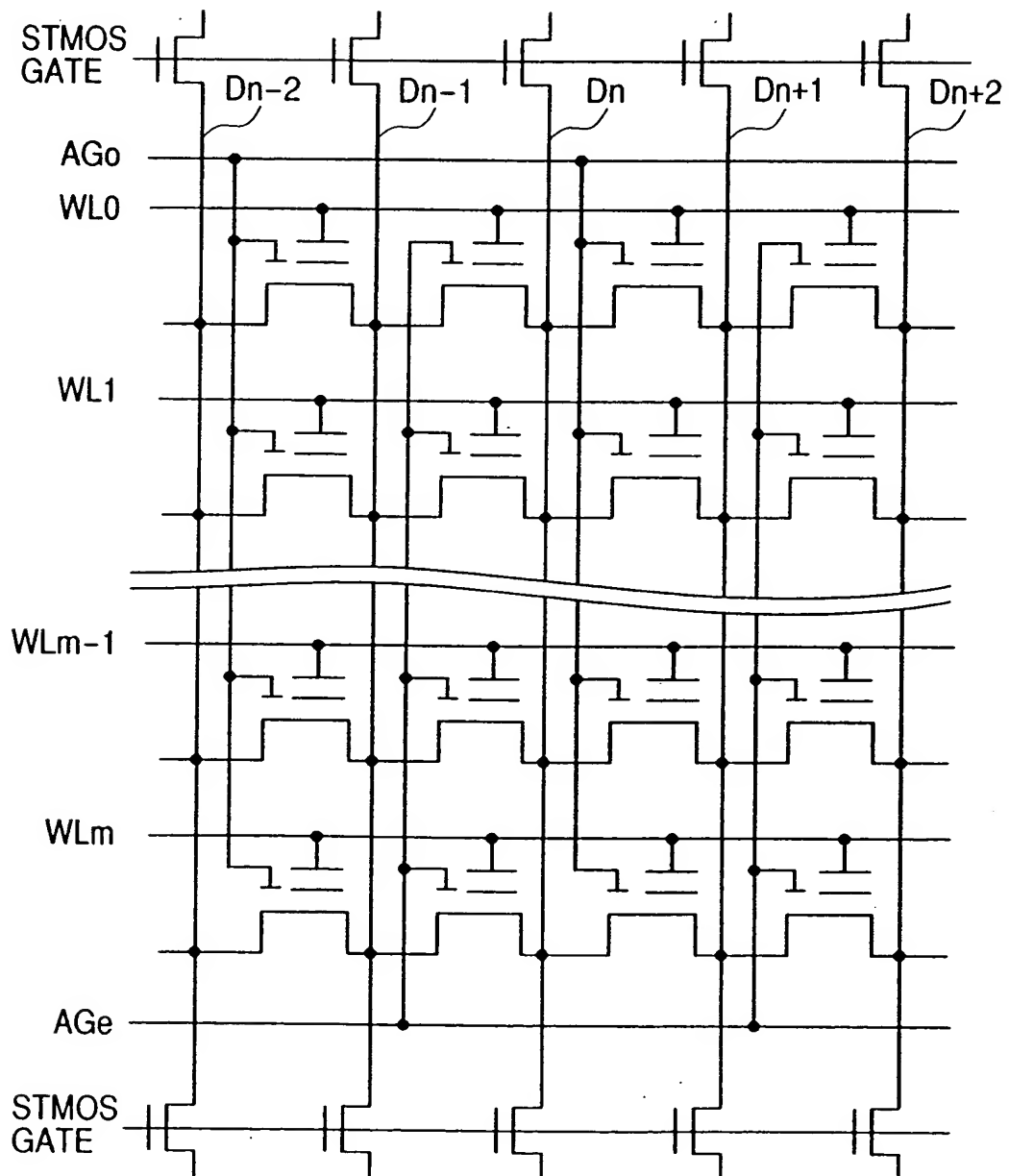


*FIG. 22*

*FIG. 23A**FIG. 23B**FIG. 23C*

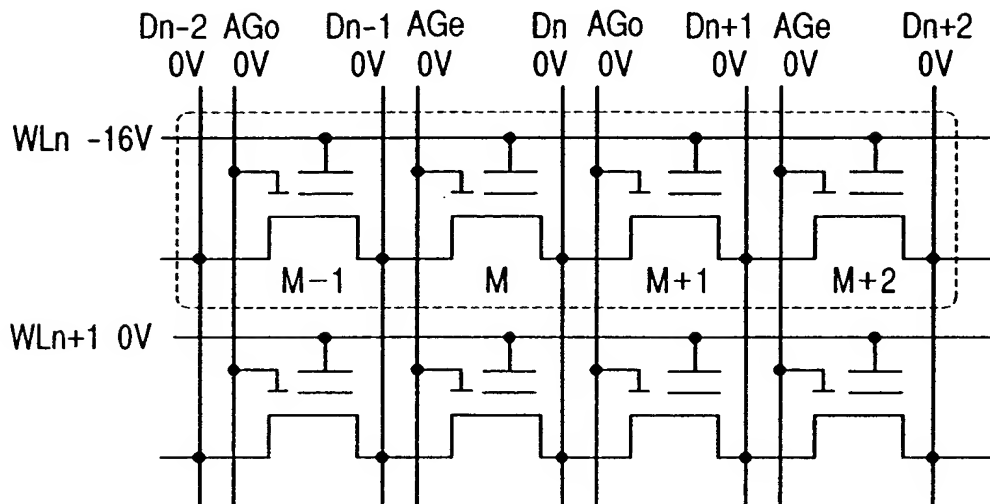
*FIG. 24A**FIG. 24B*



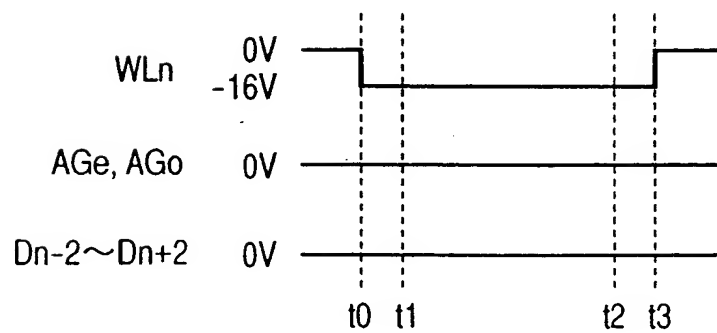
*FIG. 25*

**FIG. 26A**

ERASE OPERATION VOLTAGE

**FIG. 26B**

TIMING 1



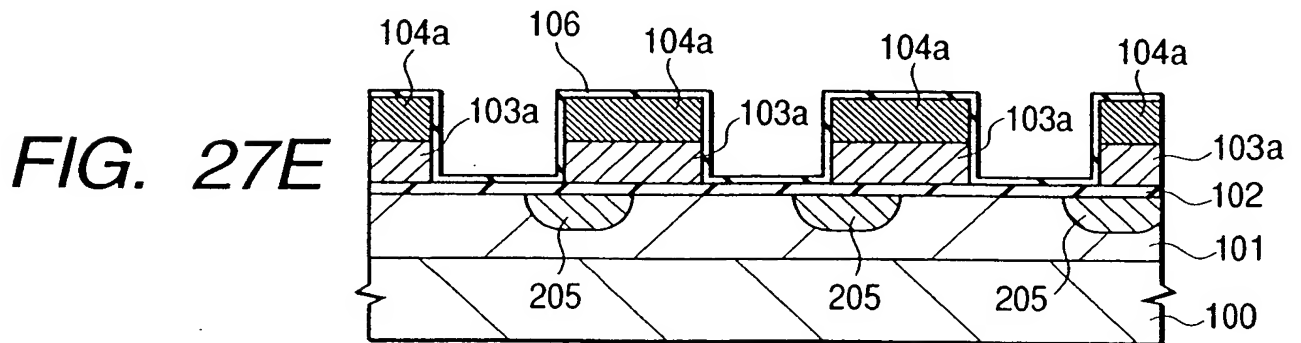
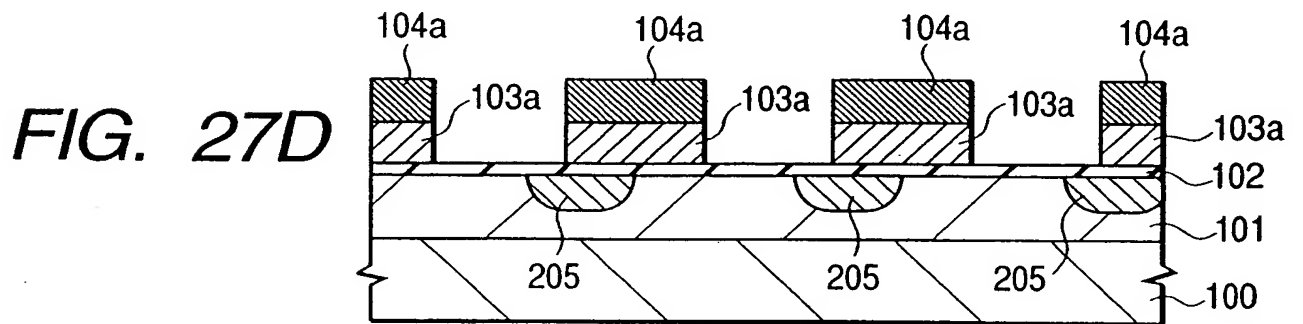
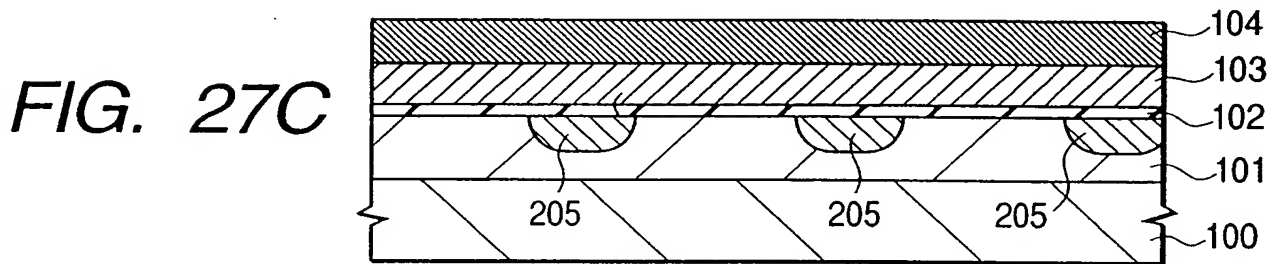
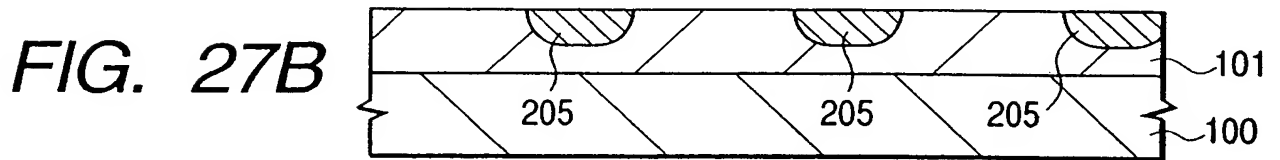
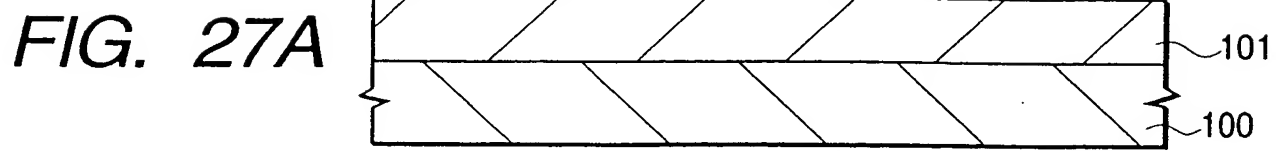
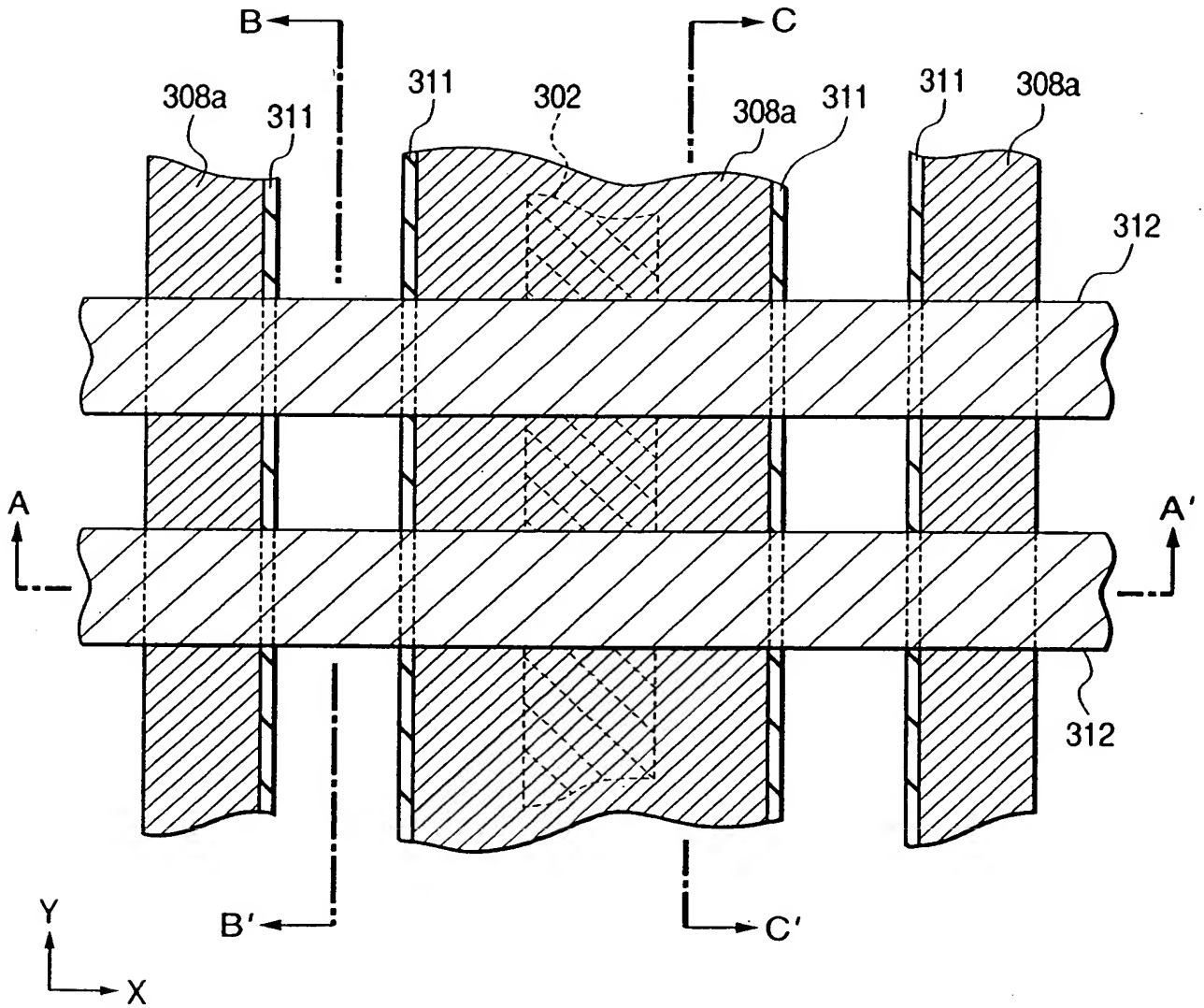
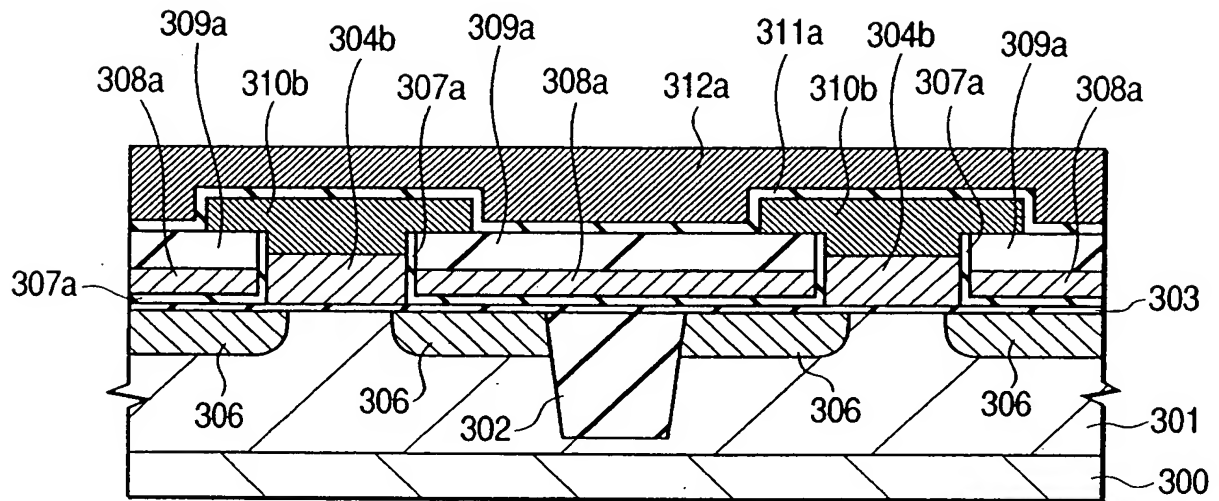
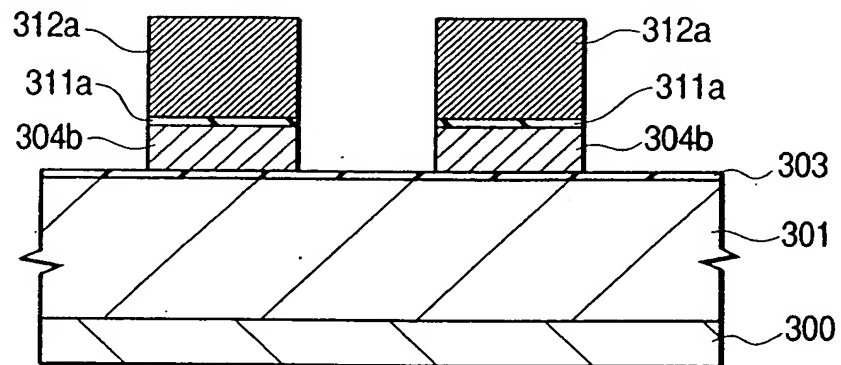
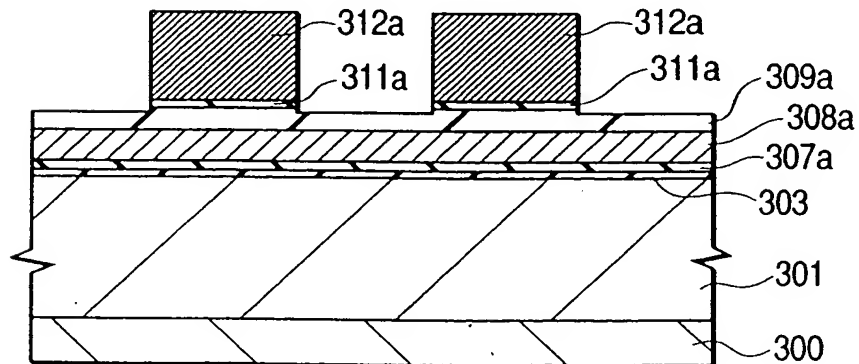
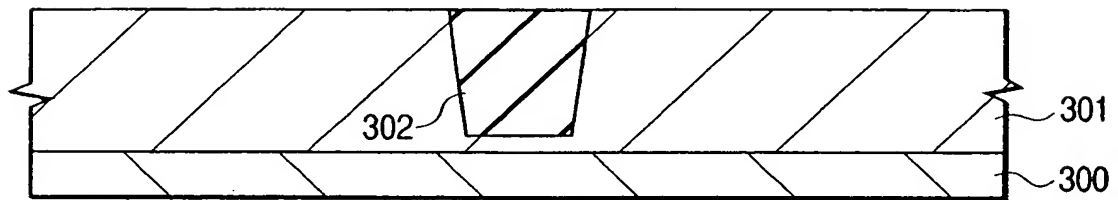
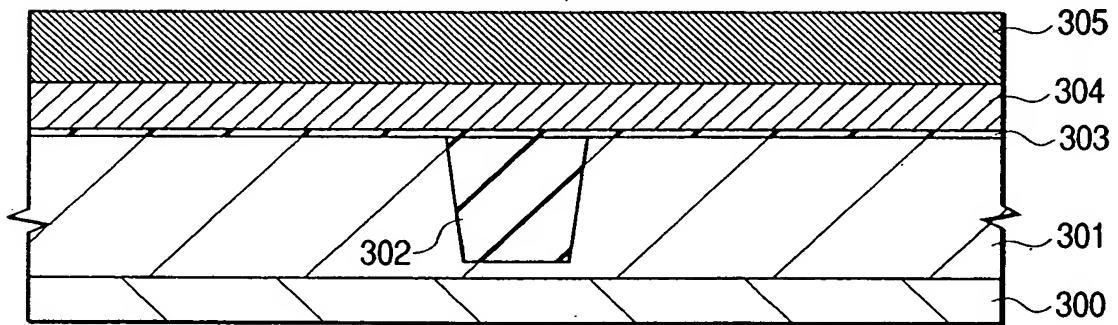
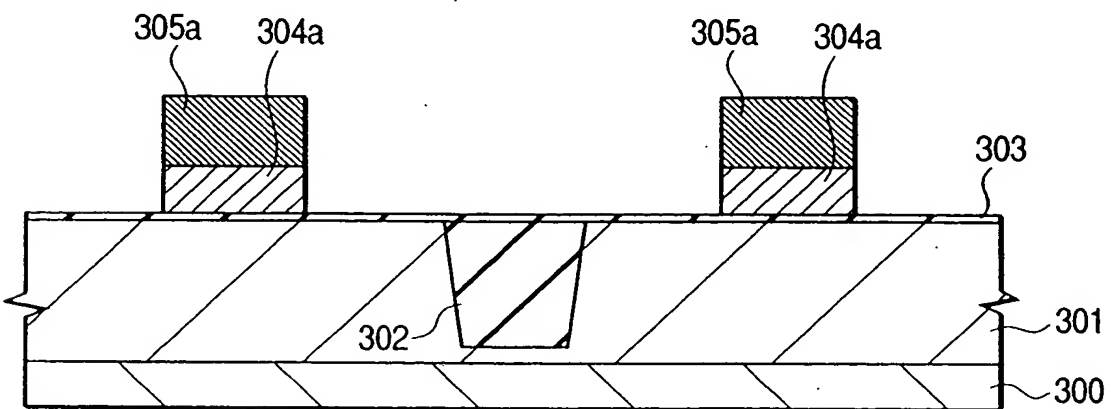
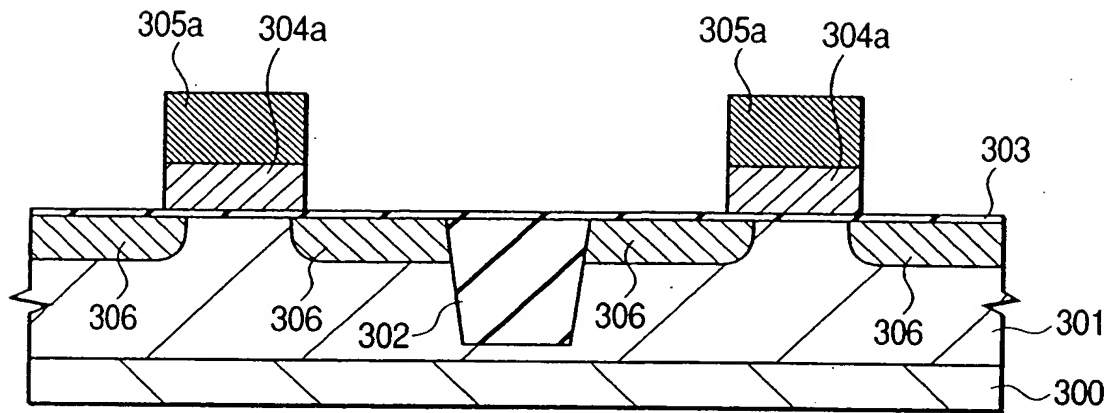
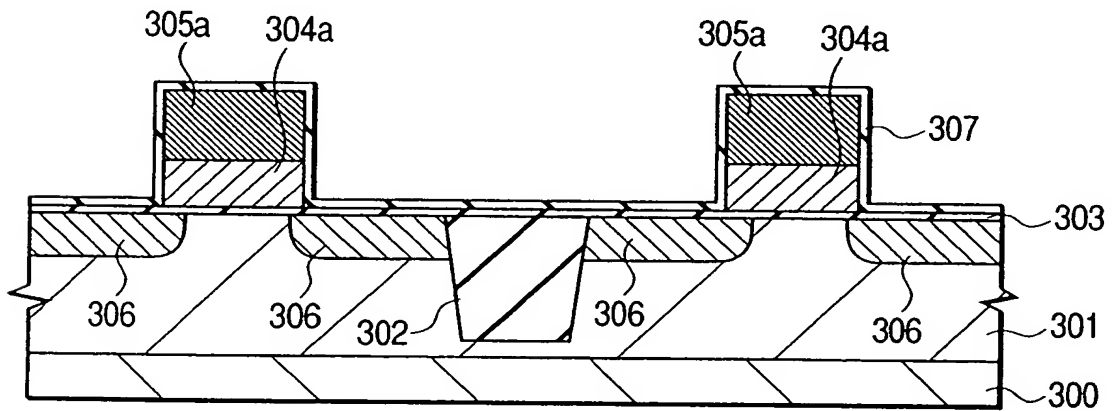
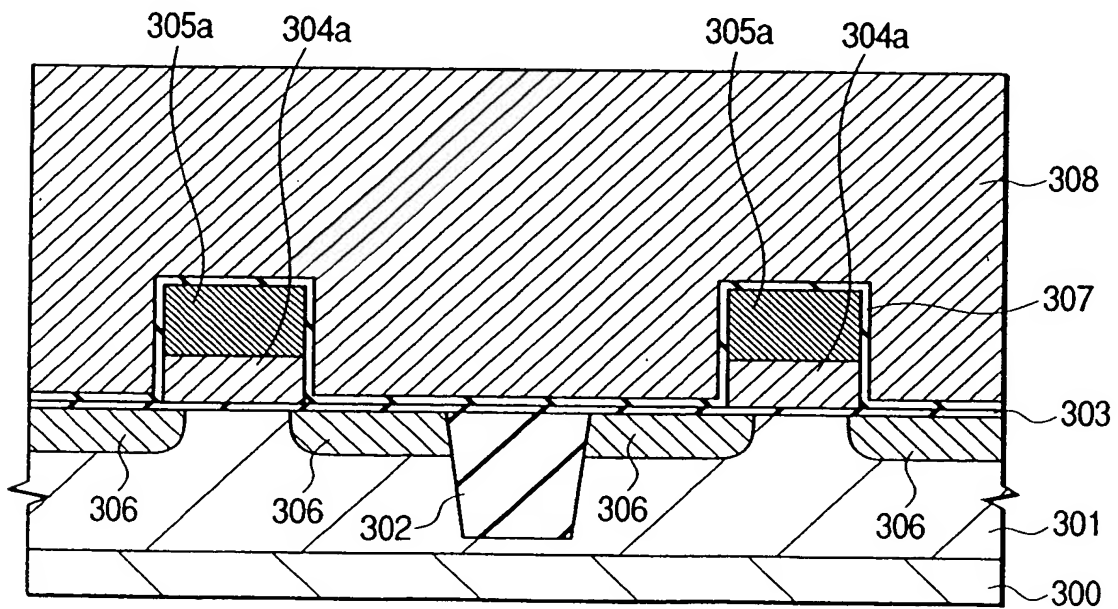


FIG. 28



*FIG. 29A**FIG. 29B**FIG. 29C*

*FIG. 30A**FIG. 30B**FIG. 30C*

**FIG. 31A****FIG. 31B****FIG. 31C**

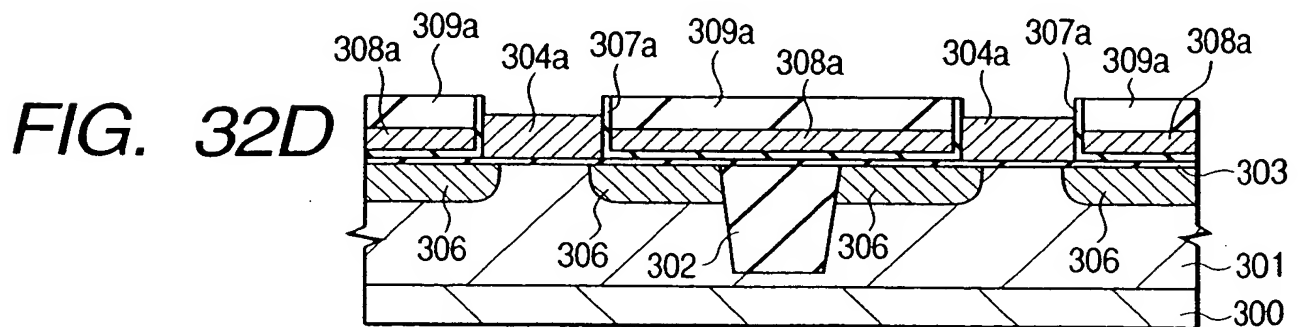
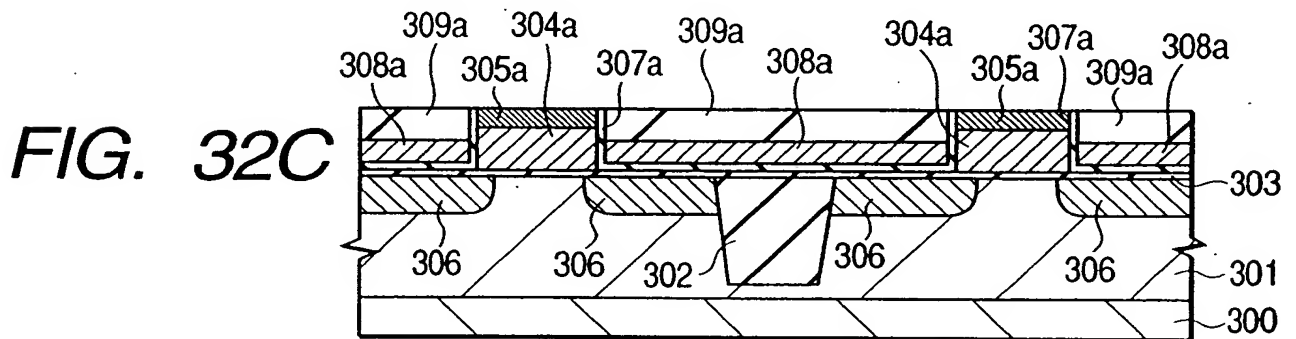
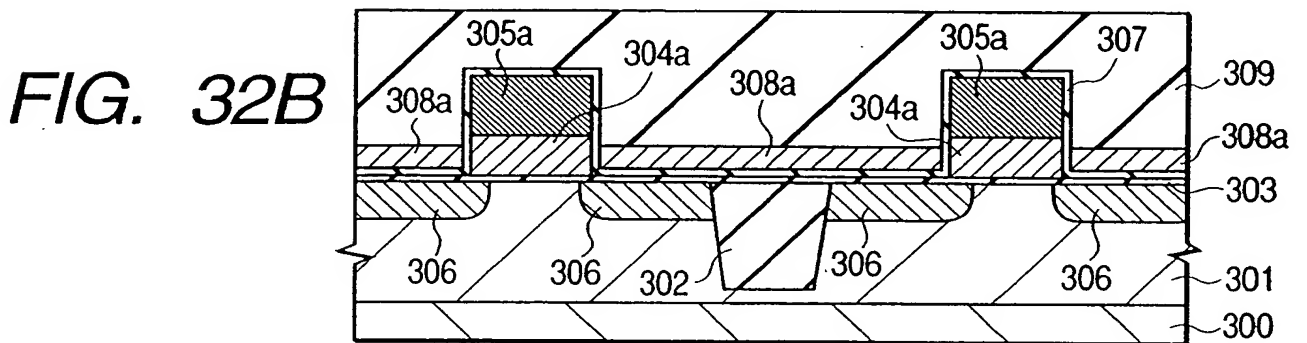
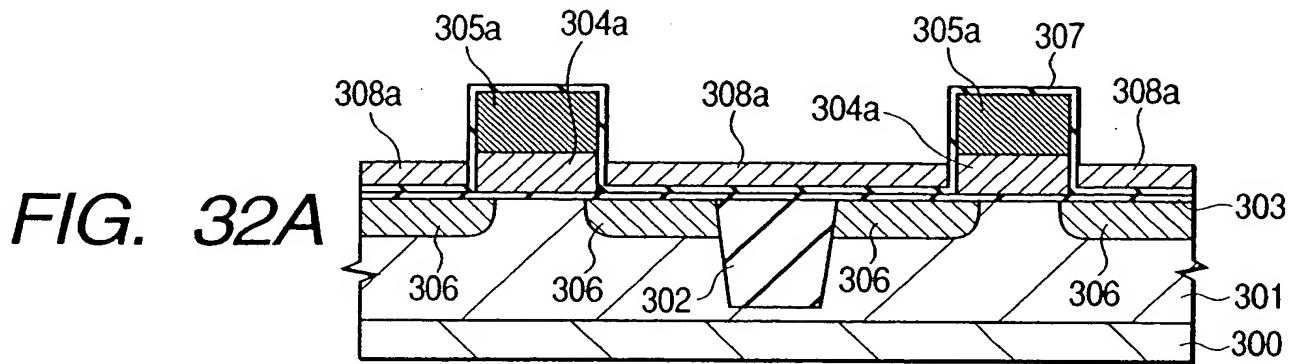




FIG. 33A

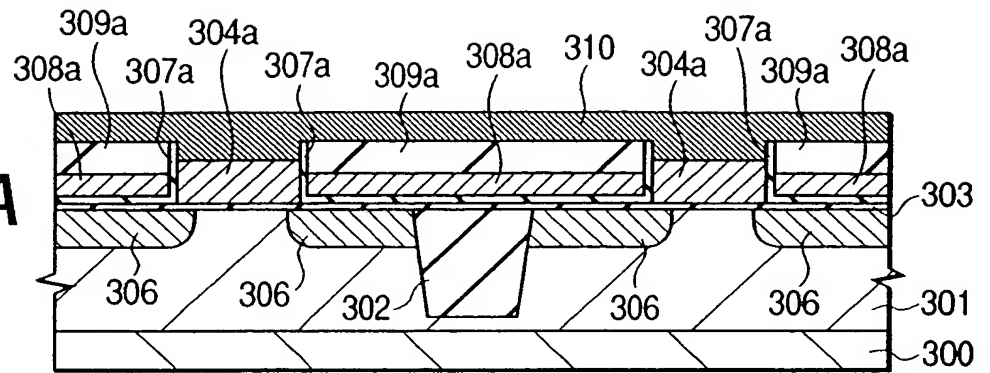


FIG. 33B

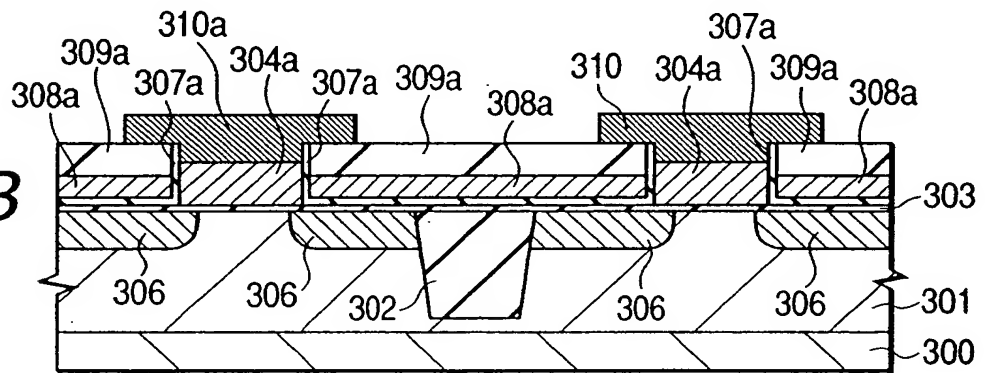


FIG. 33C

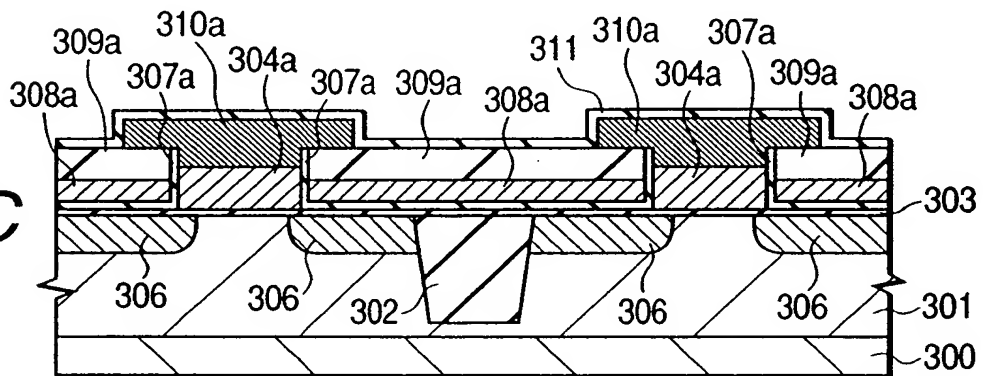
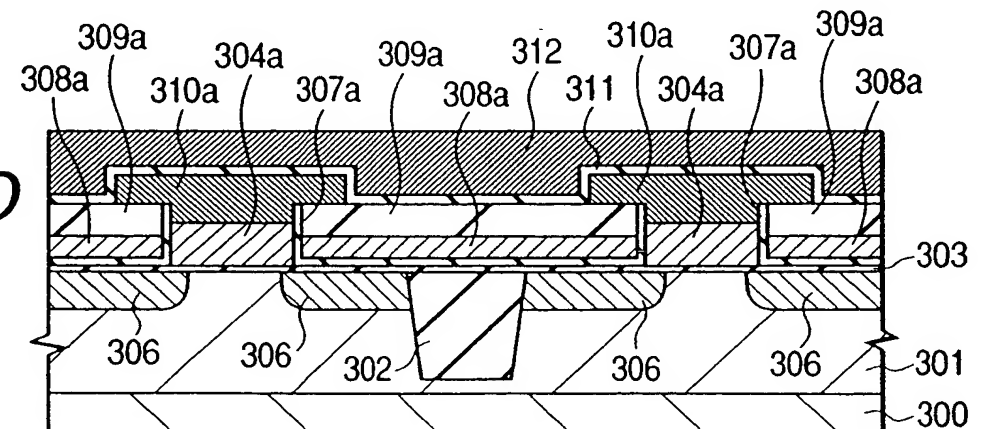
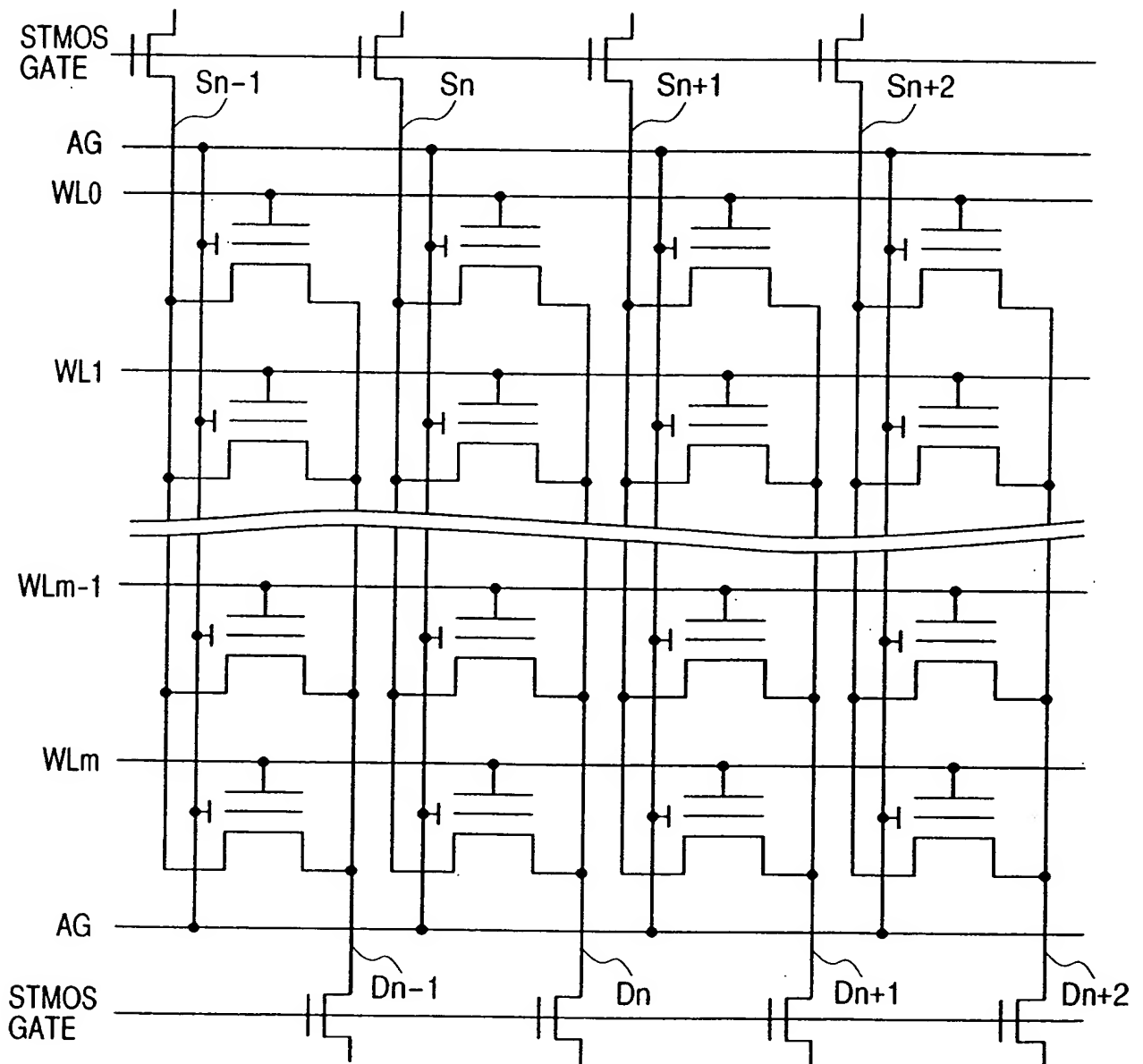


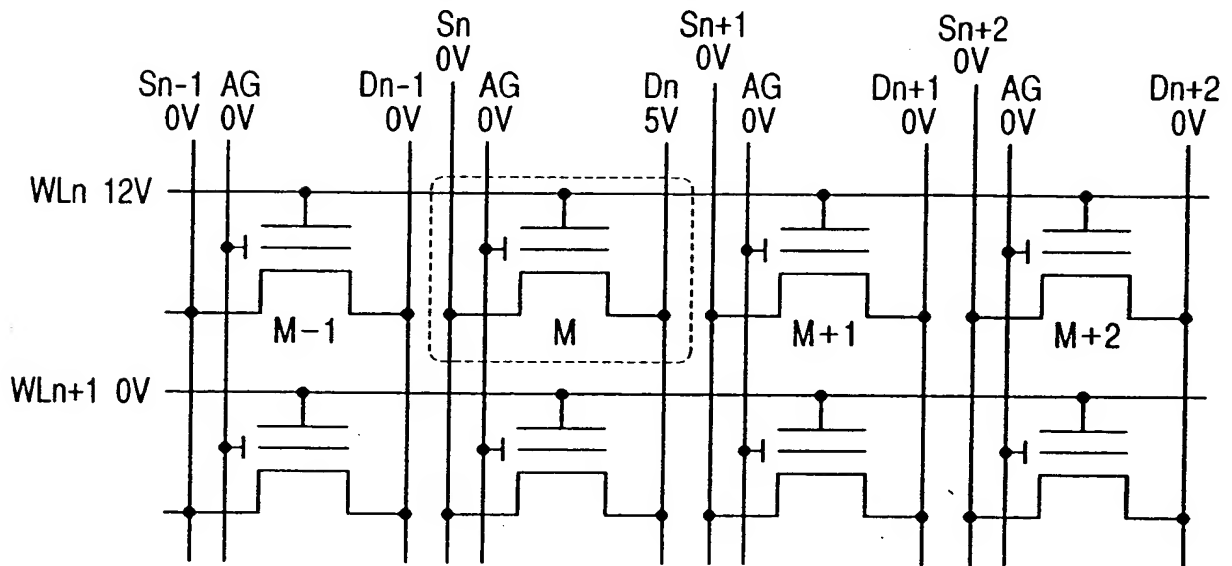
FIG. 33D



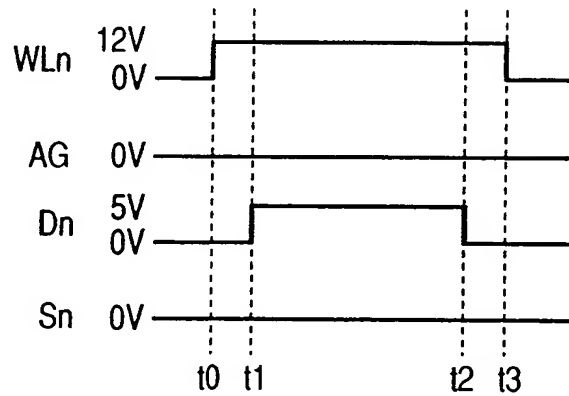
*FIG. 34*

**FIG. 35A**

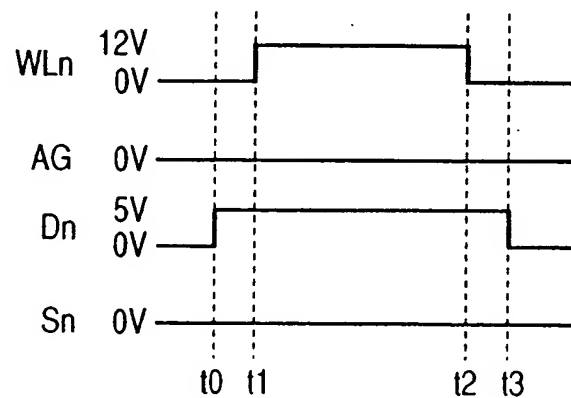
PROGRAM OPERATION VOLTAGE

**FIG. 35B**

TIMING 1

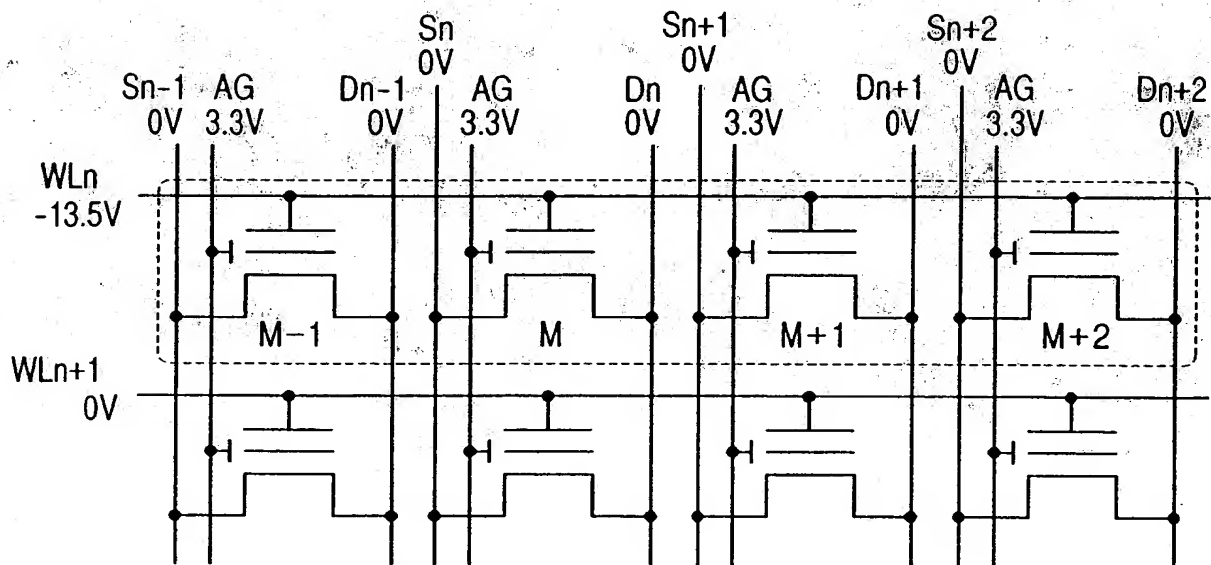
**FIG. 35C**

TIMING 2

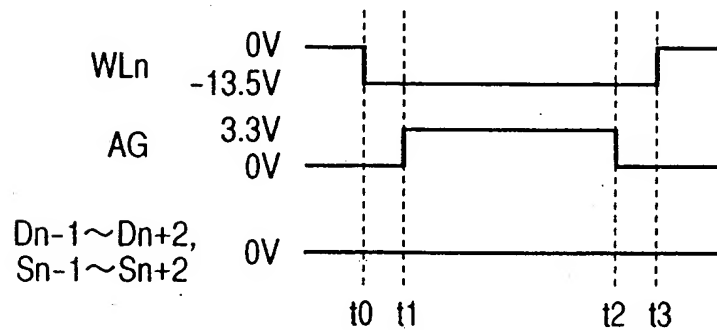


**FIG. 36A**

ERASE OPERATION VOLTAGE

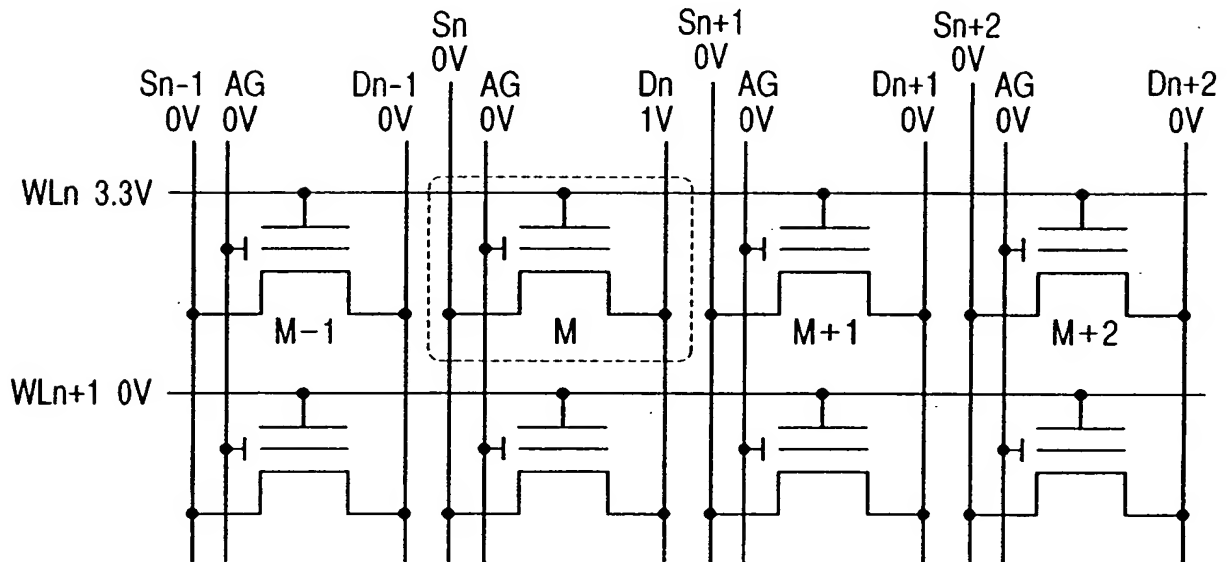
**FIG. 36B**

TIMING 1

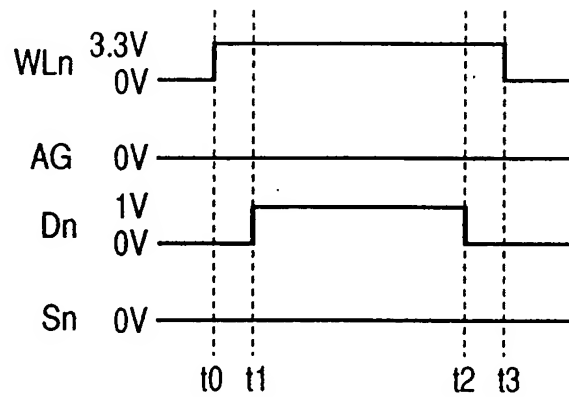


**FIG. 37A**

READ OPERATION VOLTAGE

**FIG. 37B**

TIMING 1

**FIG. 37C**

TIMING 2

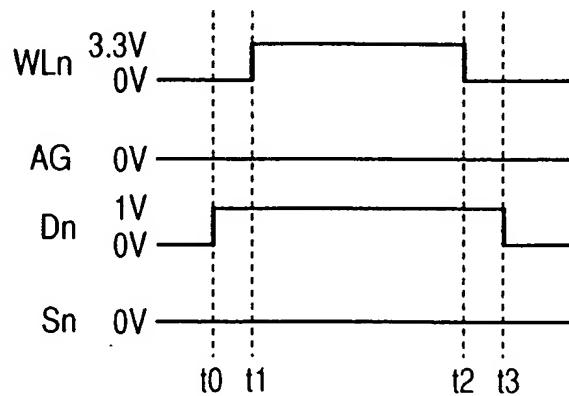
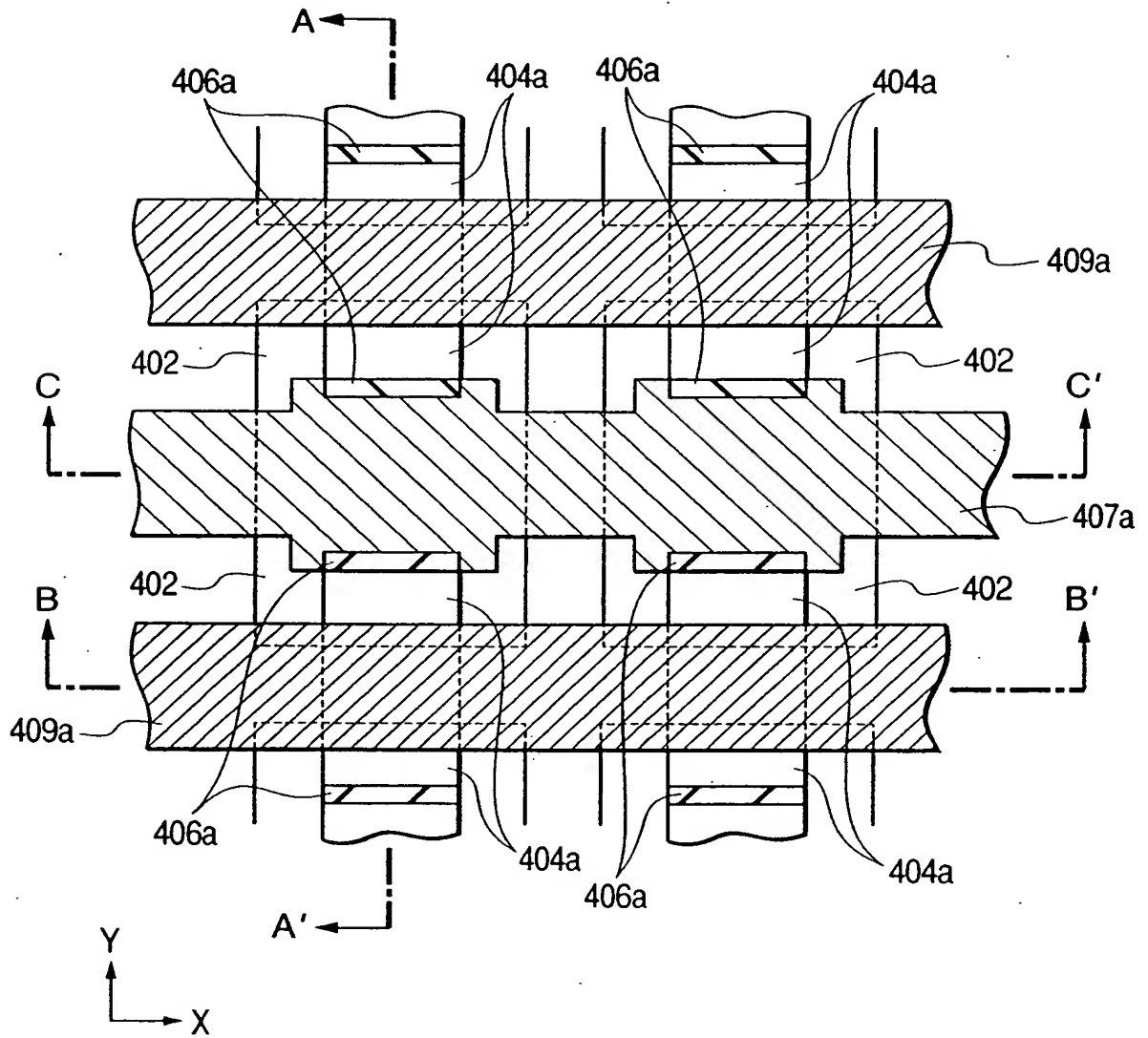
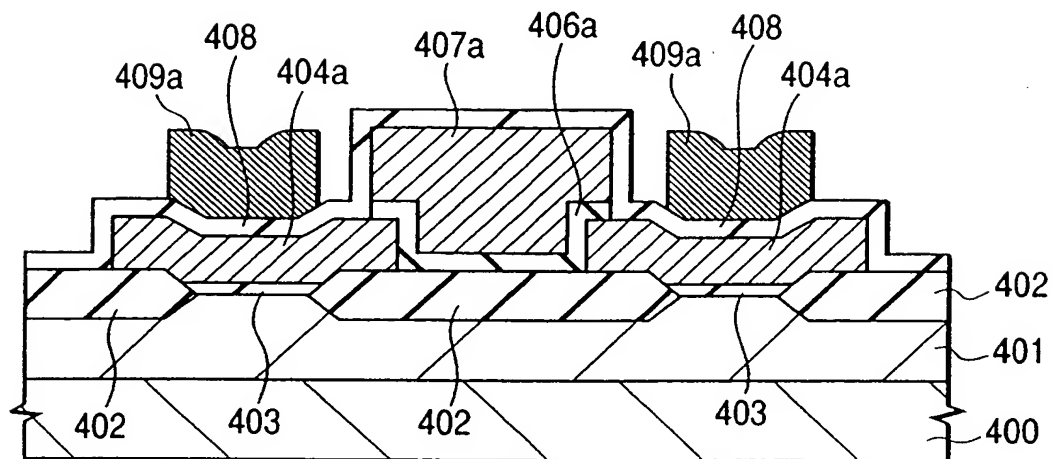
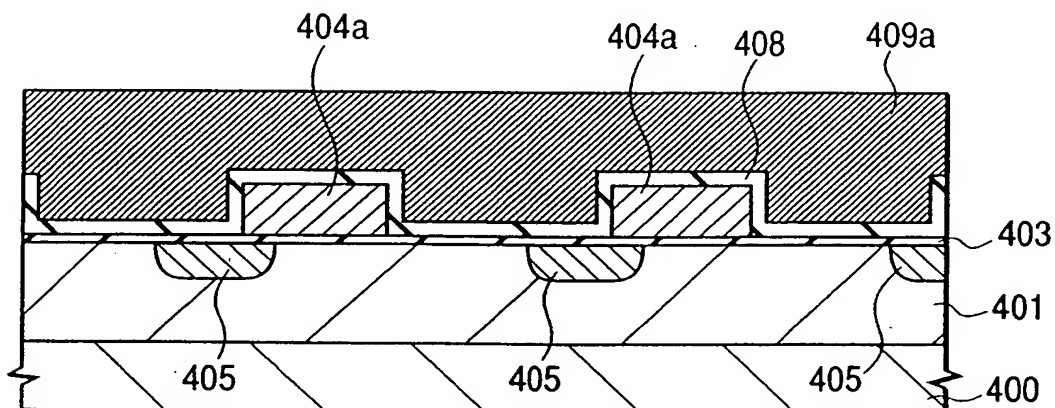
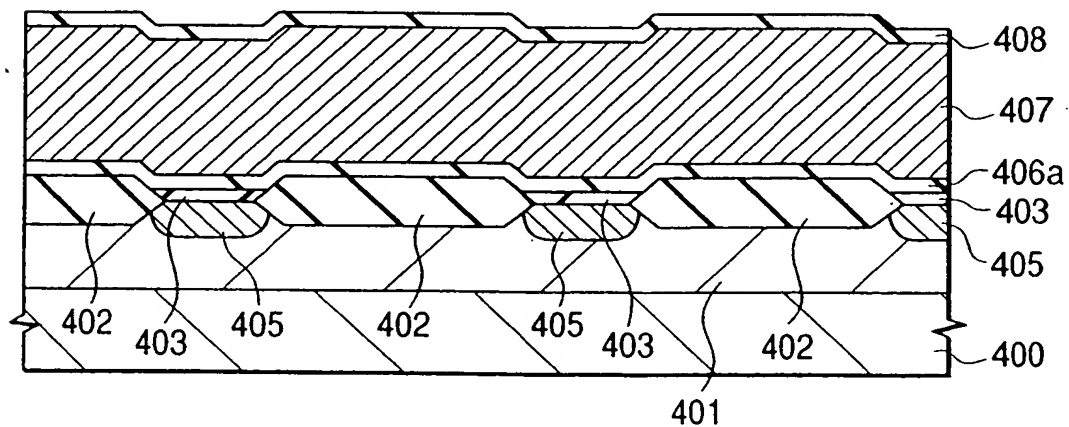
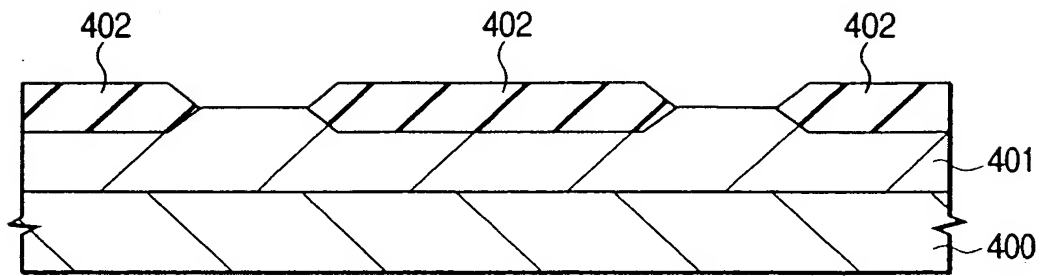
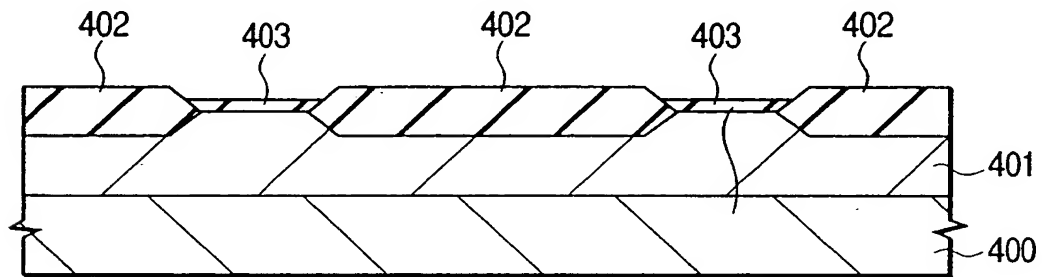
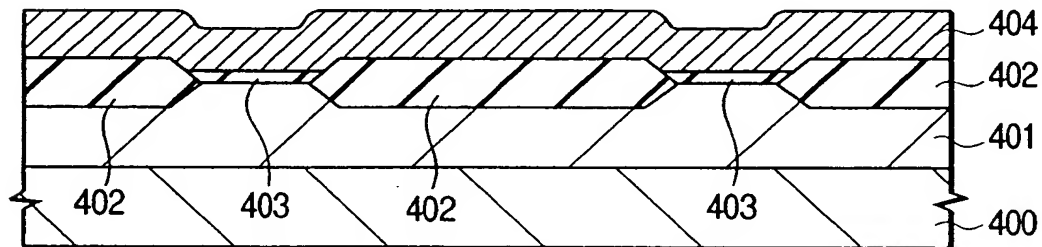
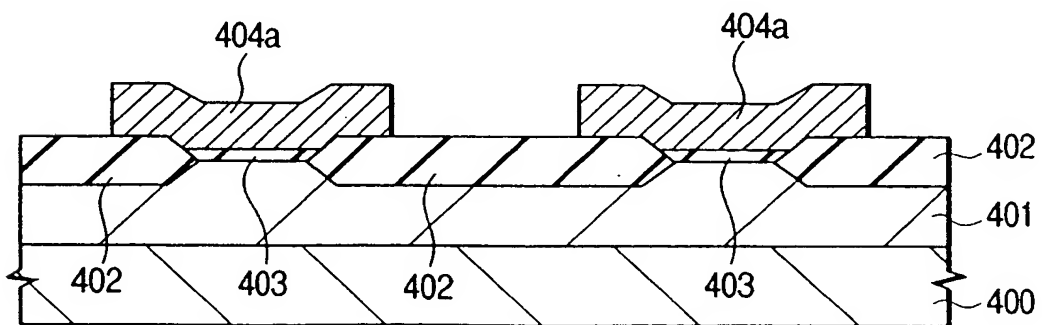


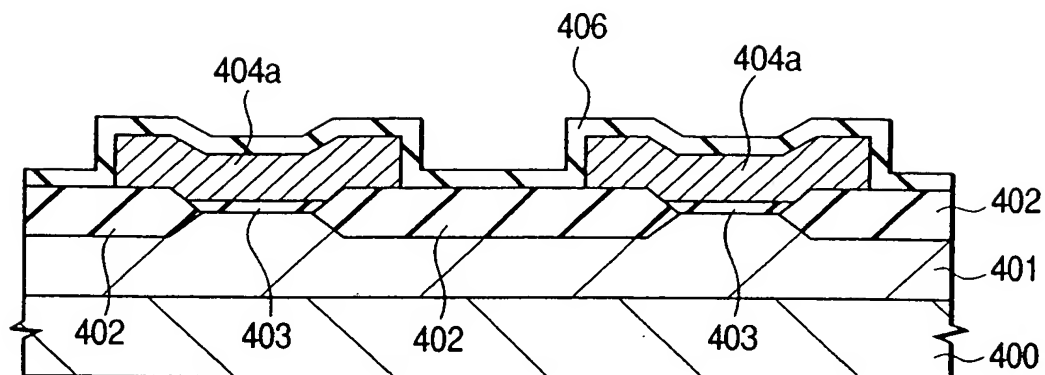
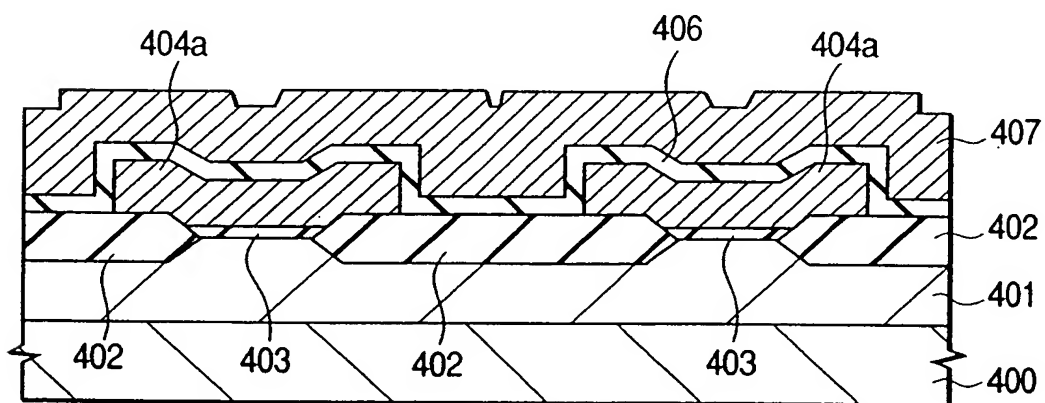
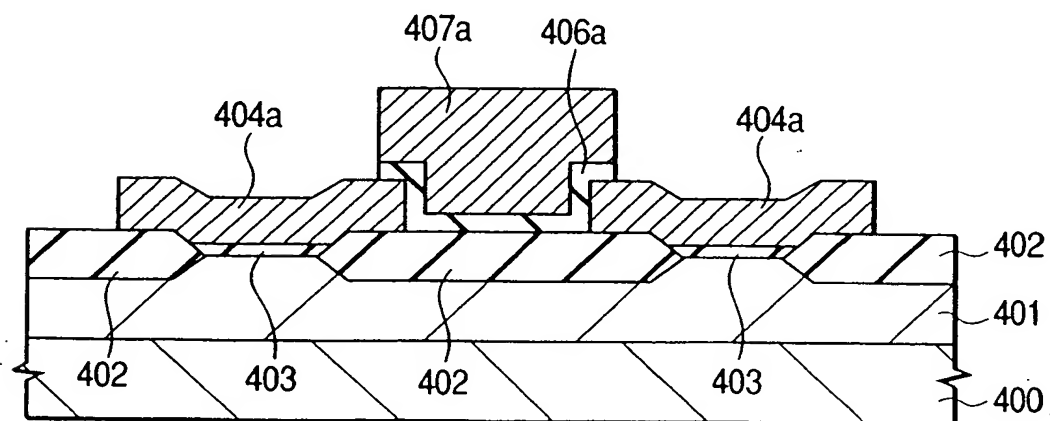
FIG. 38

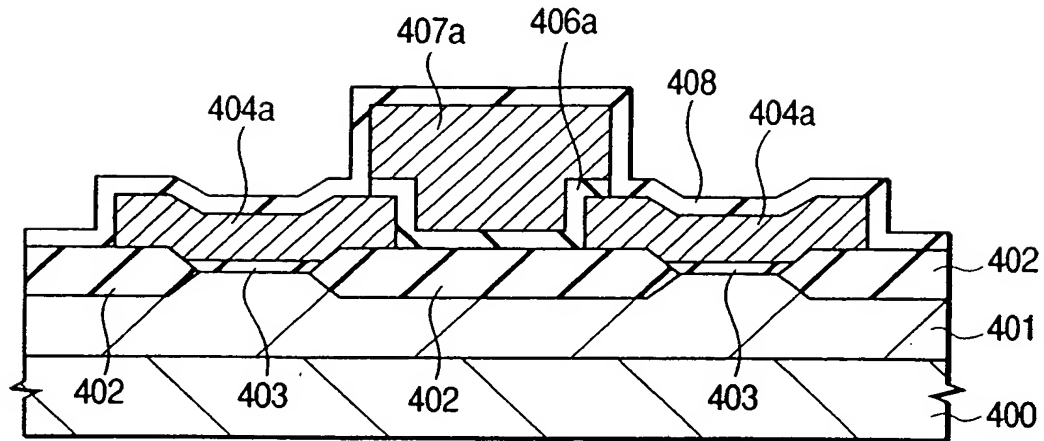
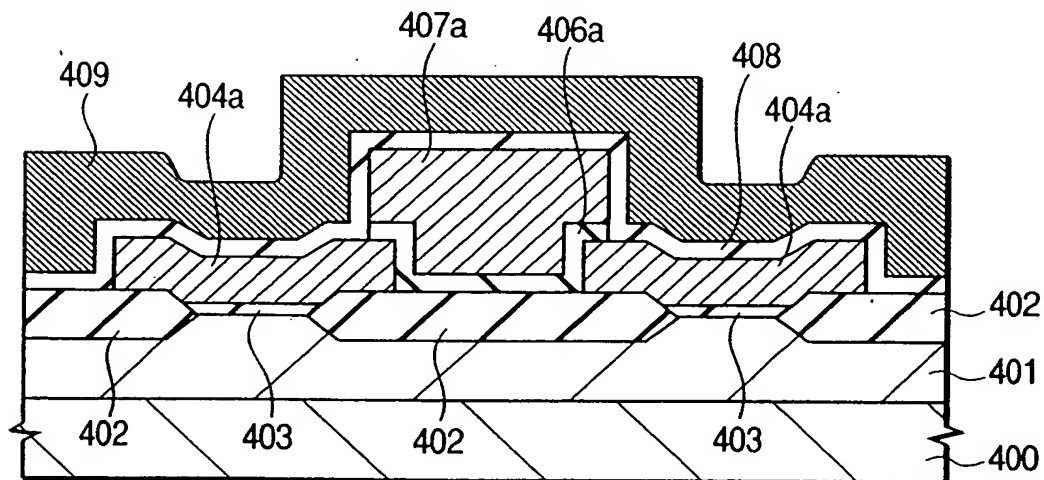
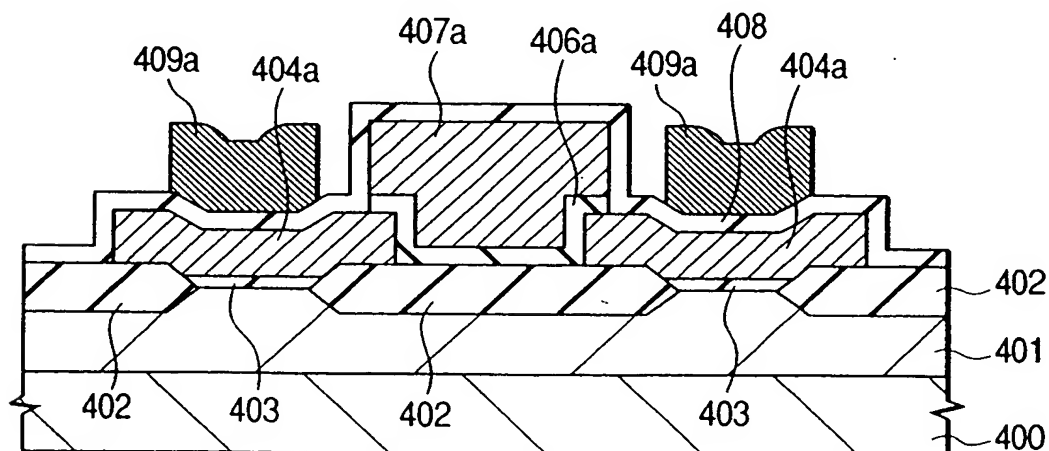


*FIG. 39A**FIG. 39B**FIG. 39C*

*FIG. 40A**FIG. 40B**FIG. 40C**FIG. 40D*

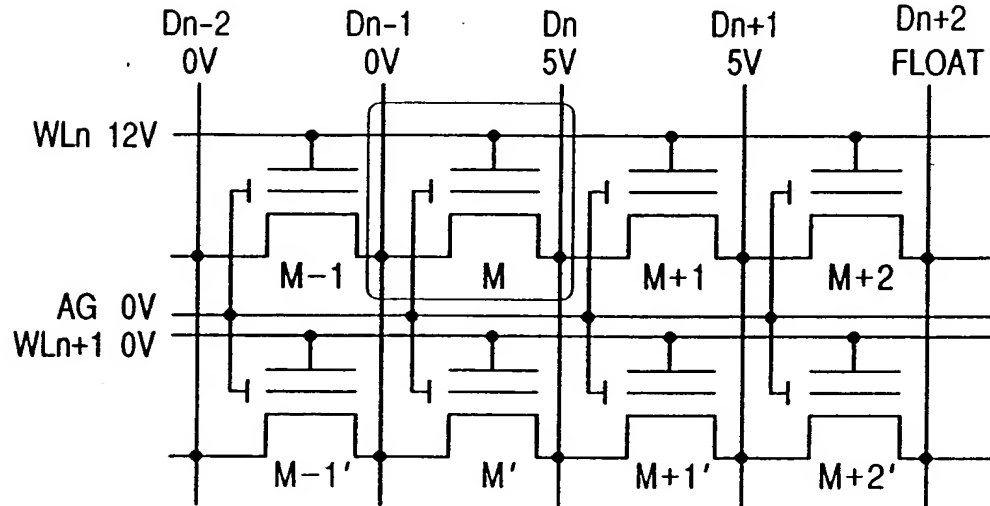


**FIG. 41A****FIG. 41B****FIG. 41C**

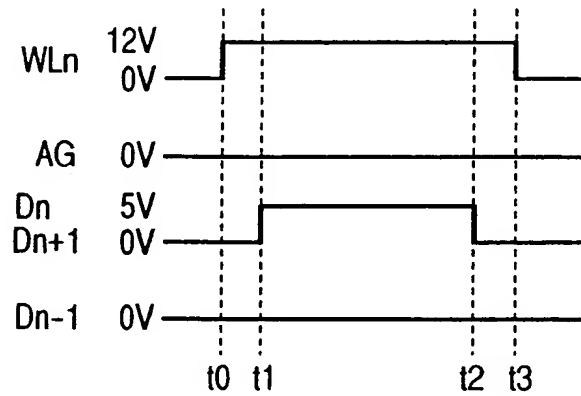
**FIG. 42A****FIG. 42B****FIG. 42C**

**FIG. 43A**

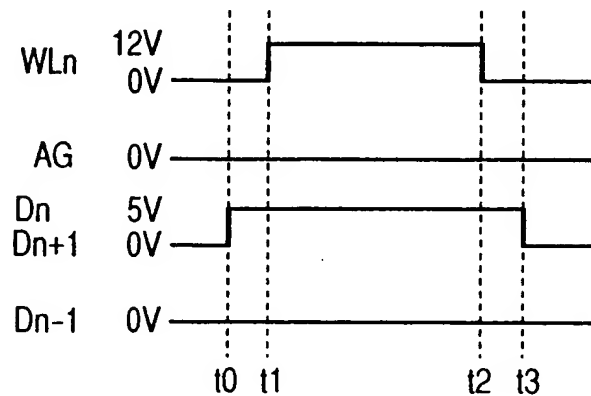
PROGRAM OPERATION VOLTAGE

**FIG. 43B**

TIMING 1

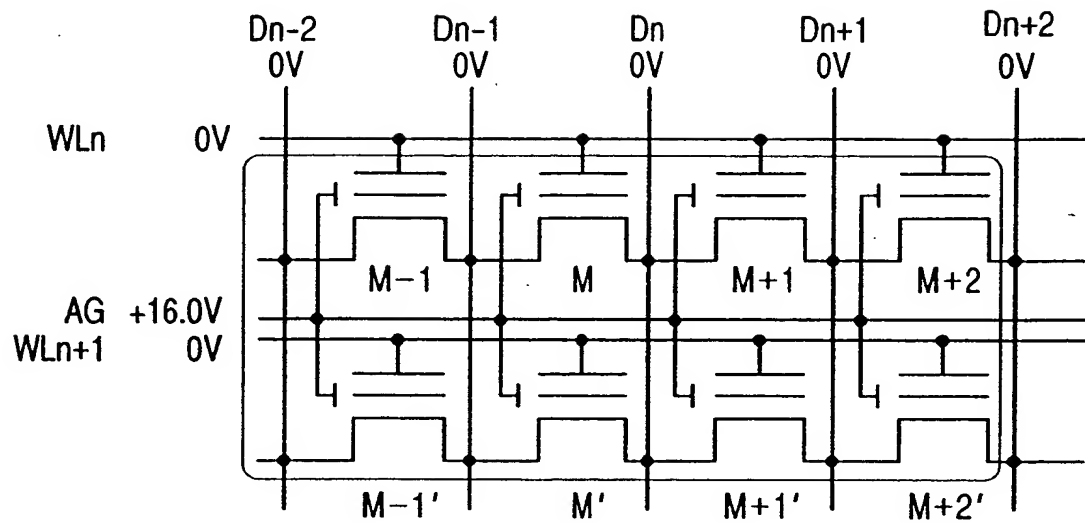
**FIG. 43C**

TIMING 2

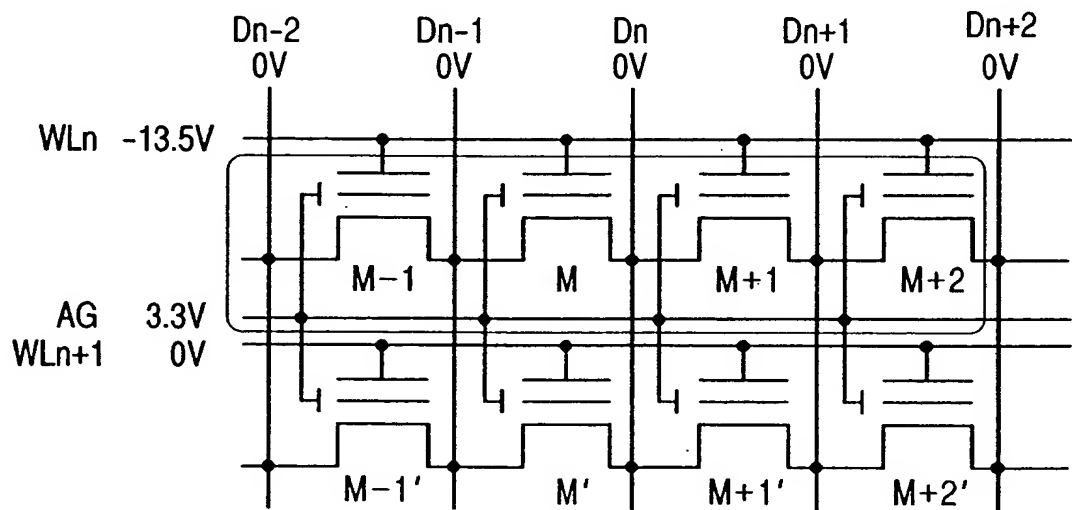


**FIG. 44A**

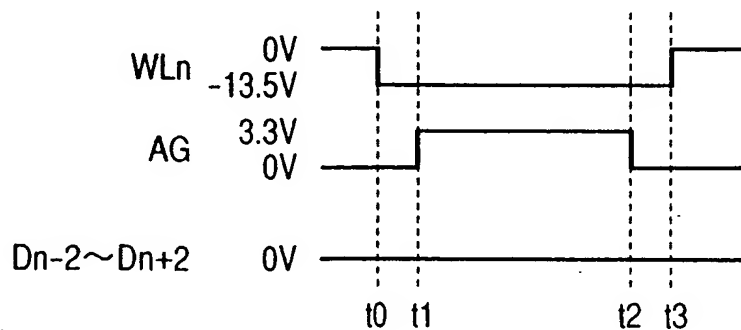
ERASE OPERATION VOLTAGE

**FIG. 44B**

ERASE OPERATION VOLTAGE

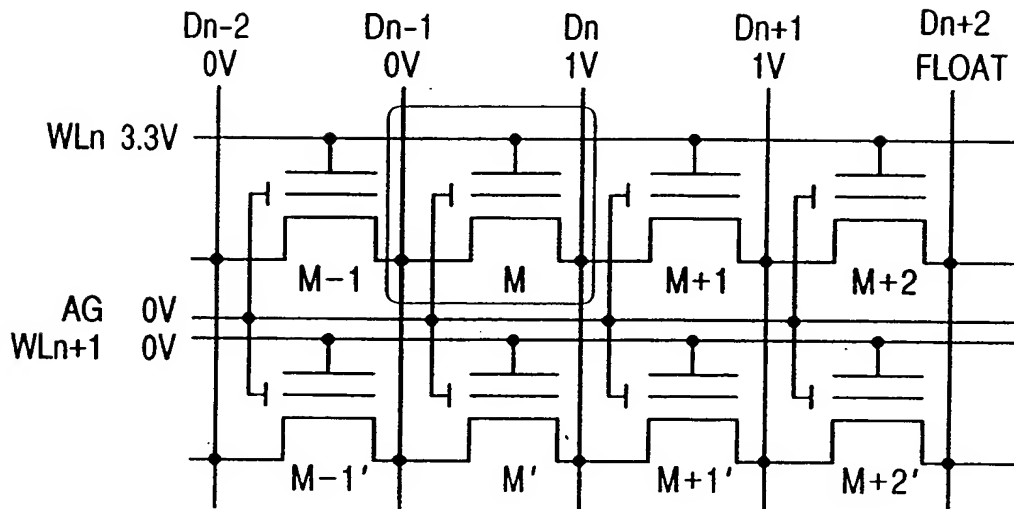
**FIG. 44C**

TIMING 1

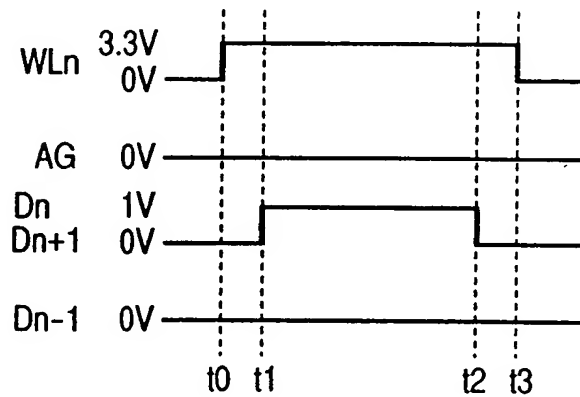


**FIG. 45A**

READ OPERATION VOLTAGE

**FIG. 45B**

TIMING 1

**FIG. 45C**

TIMING 2

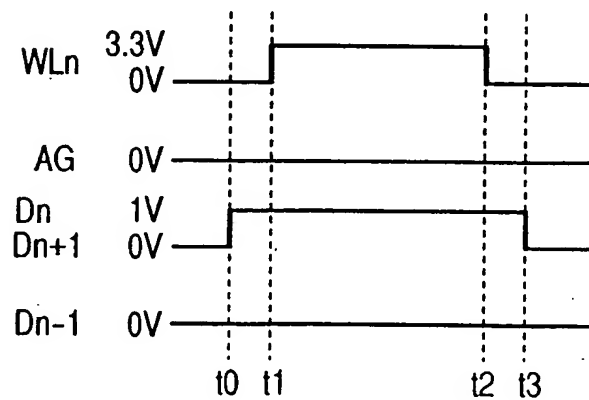


FIG. 46

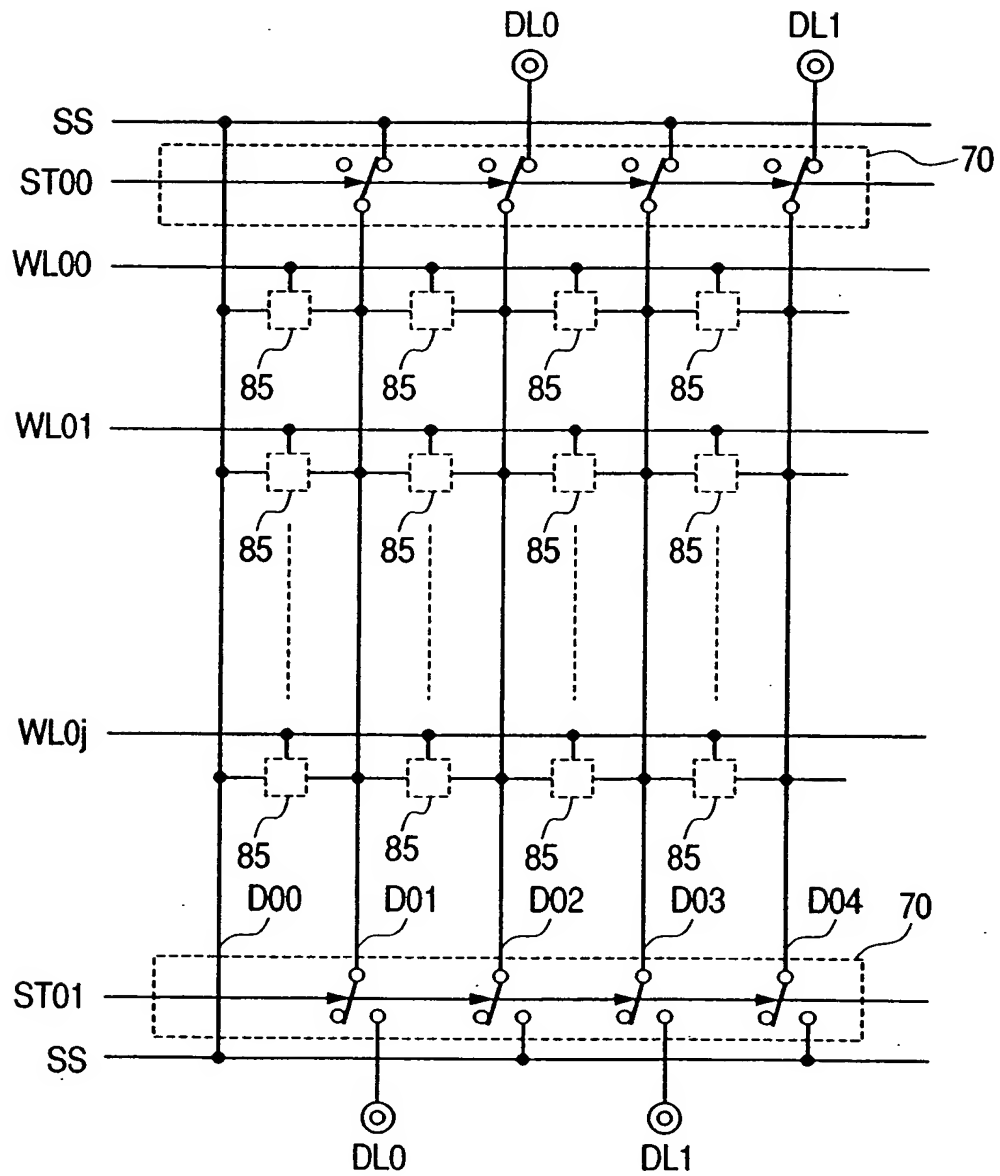


FIG. 47

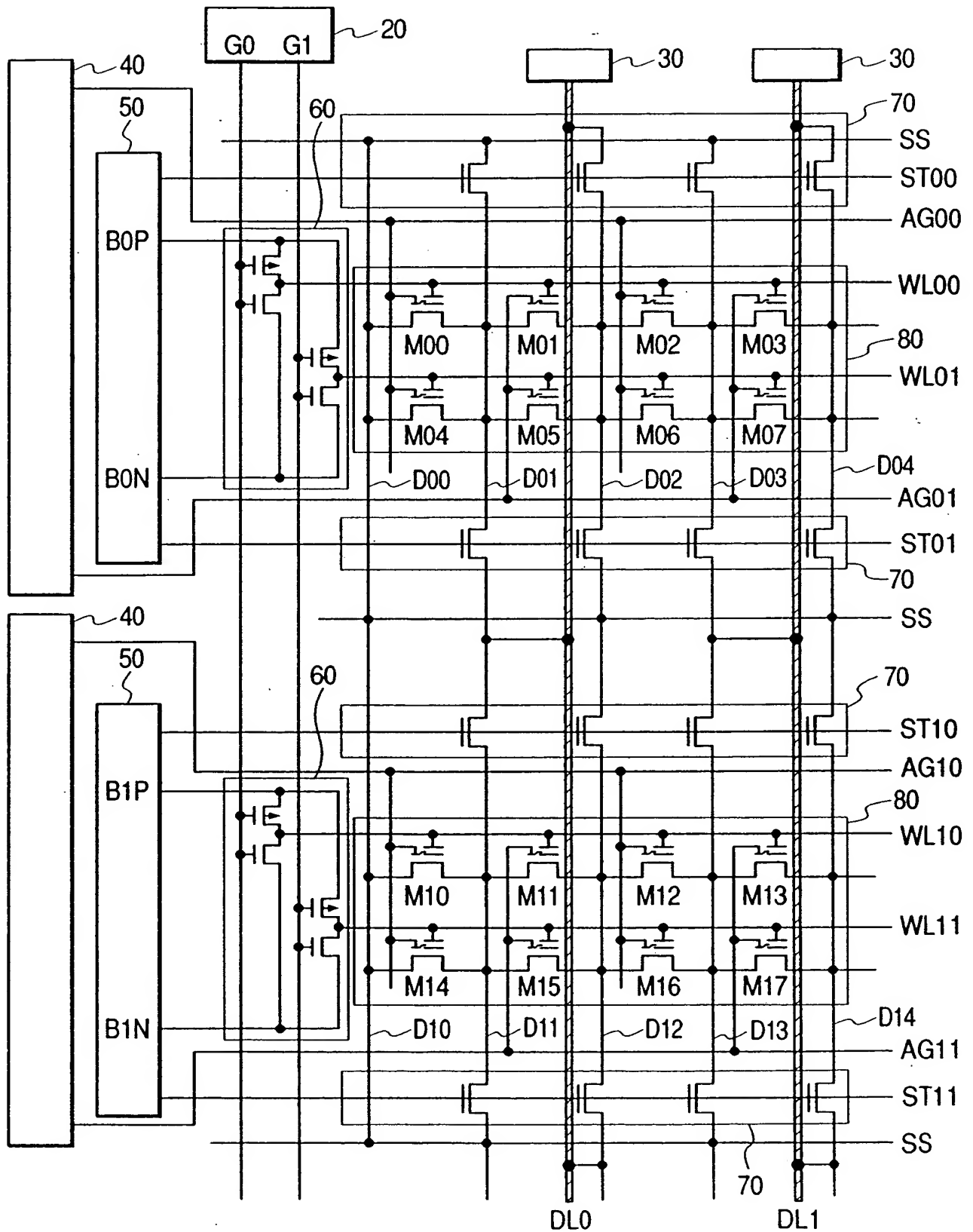


FIG. 48

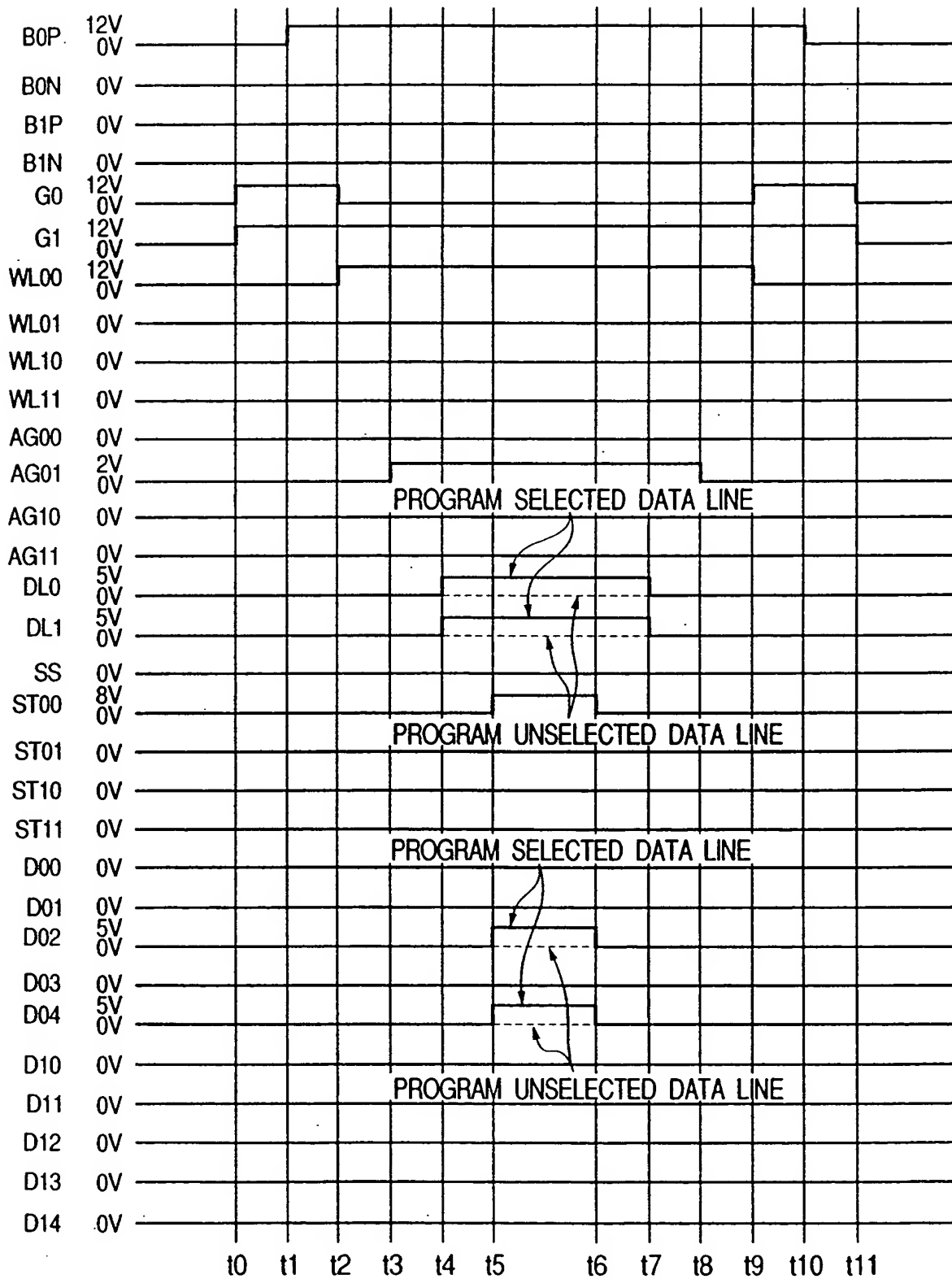




FIG. 49

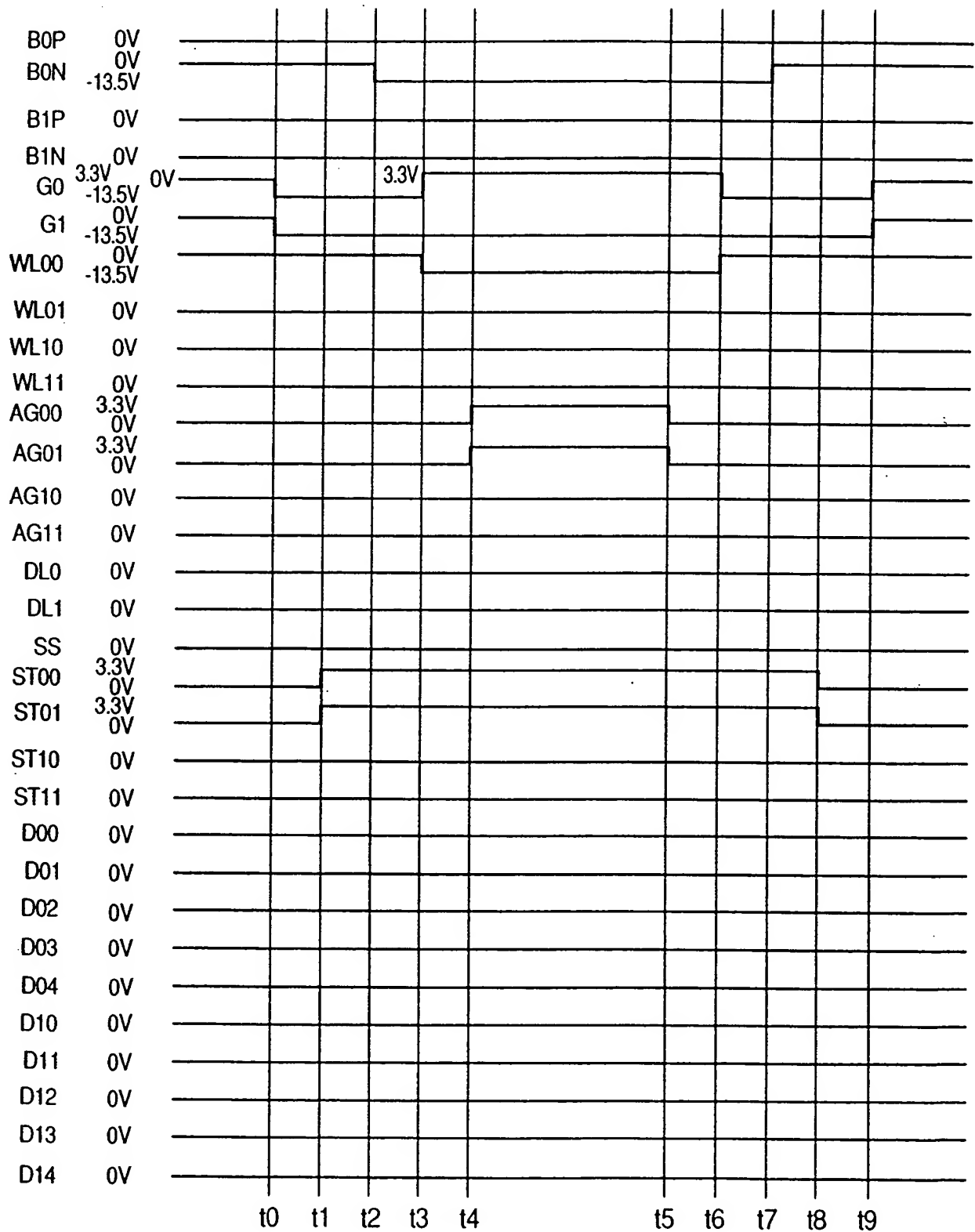


FIG. 50

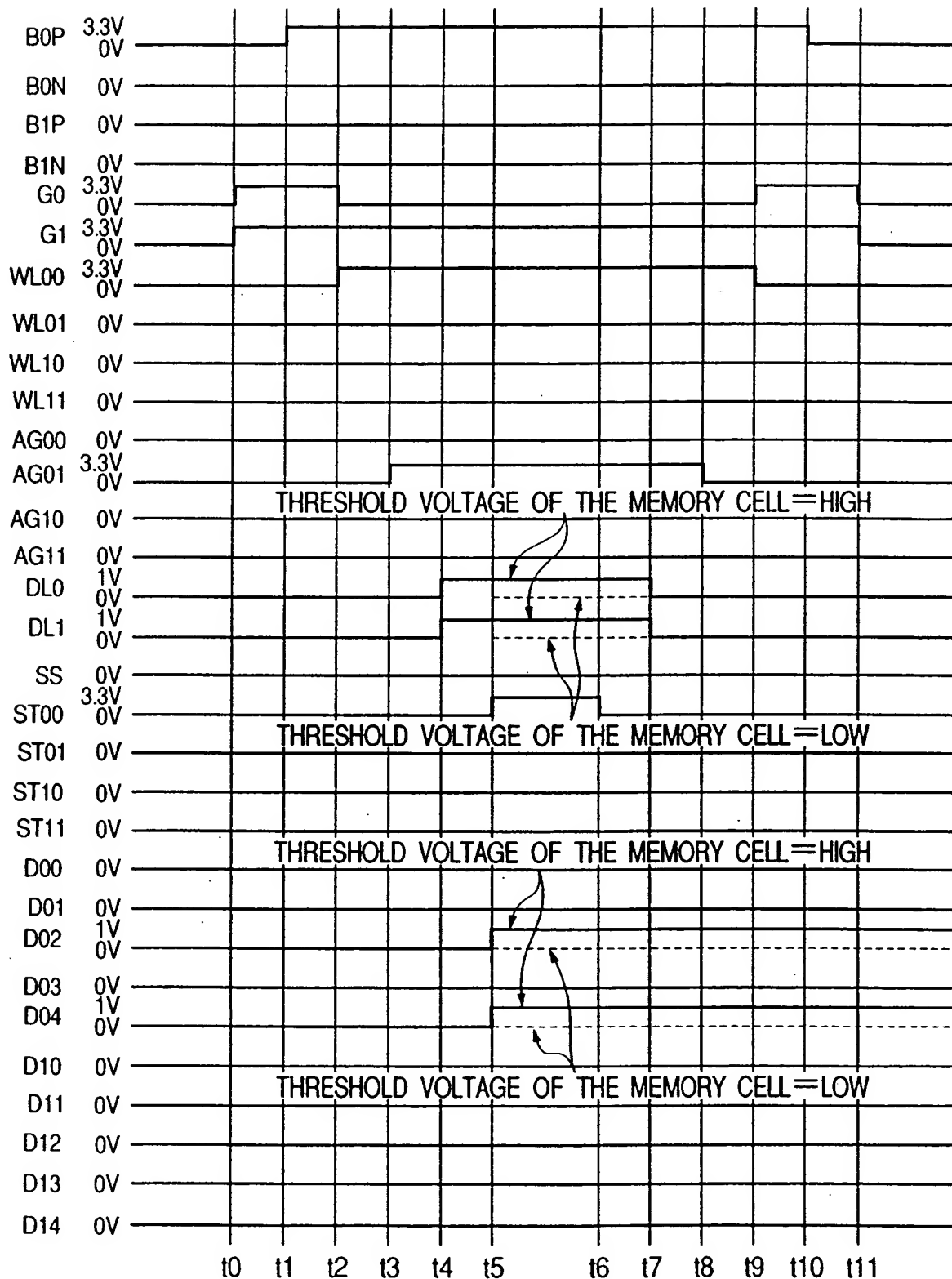
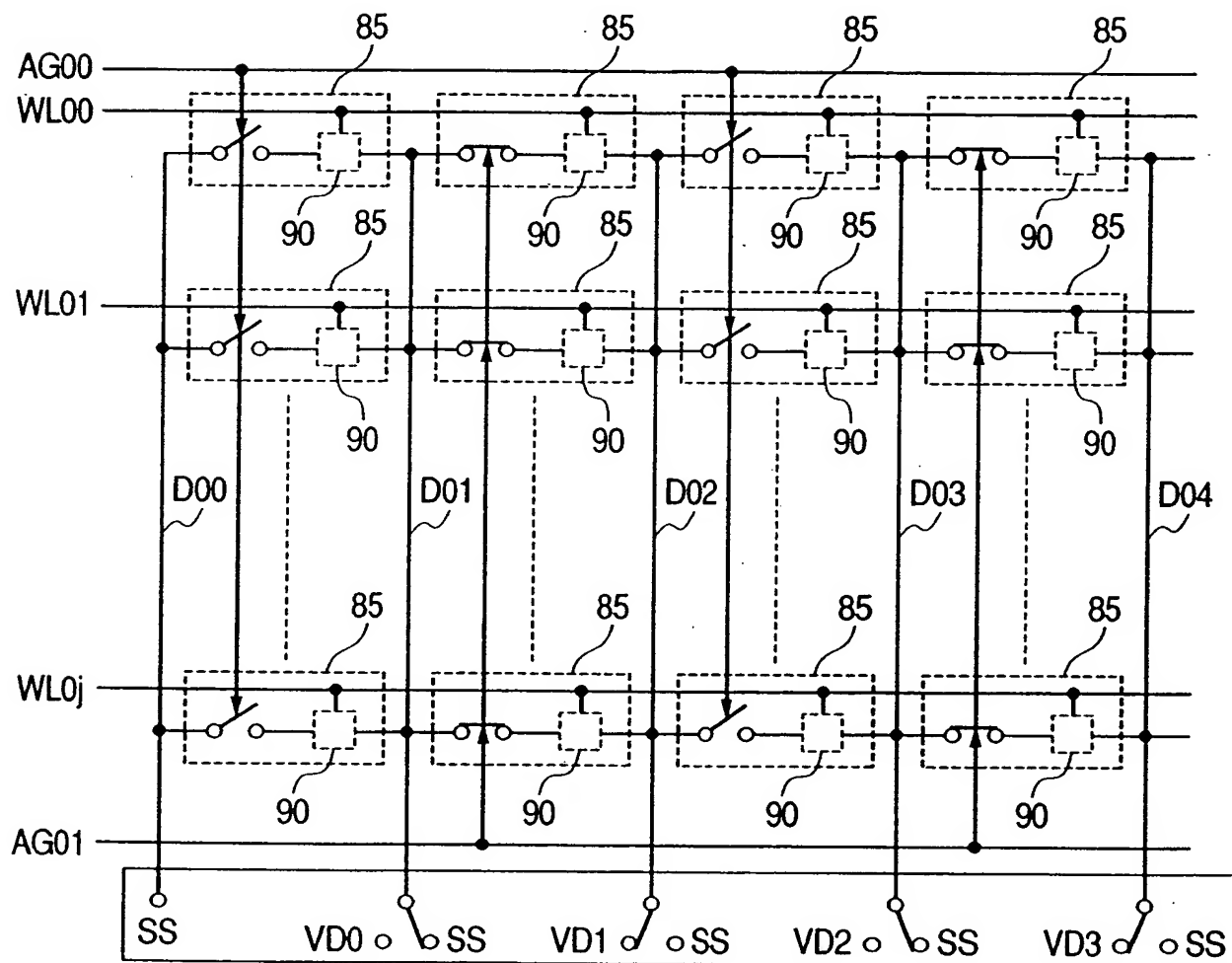
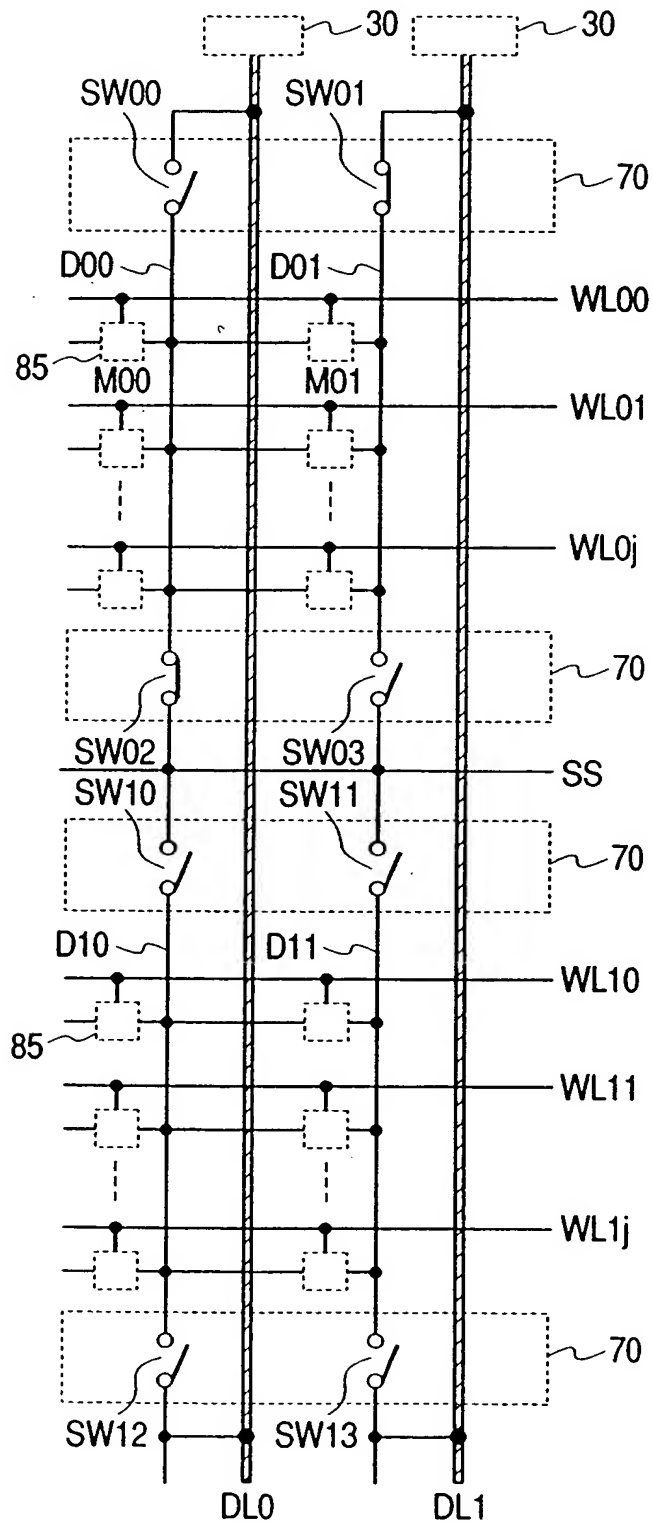


FIG. 51



**FIG. 52A**

## WITH SELECT TRANSISTOR



**FIG. 52B**

WITHOUT SELECT TRANSISTOR

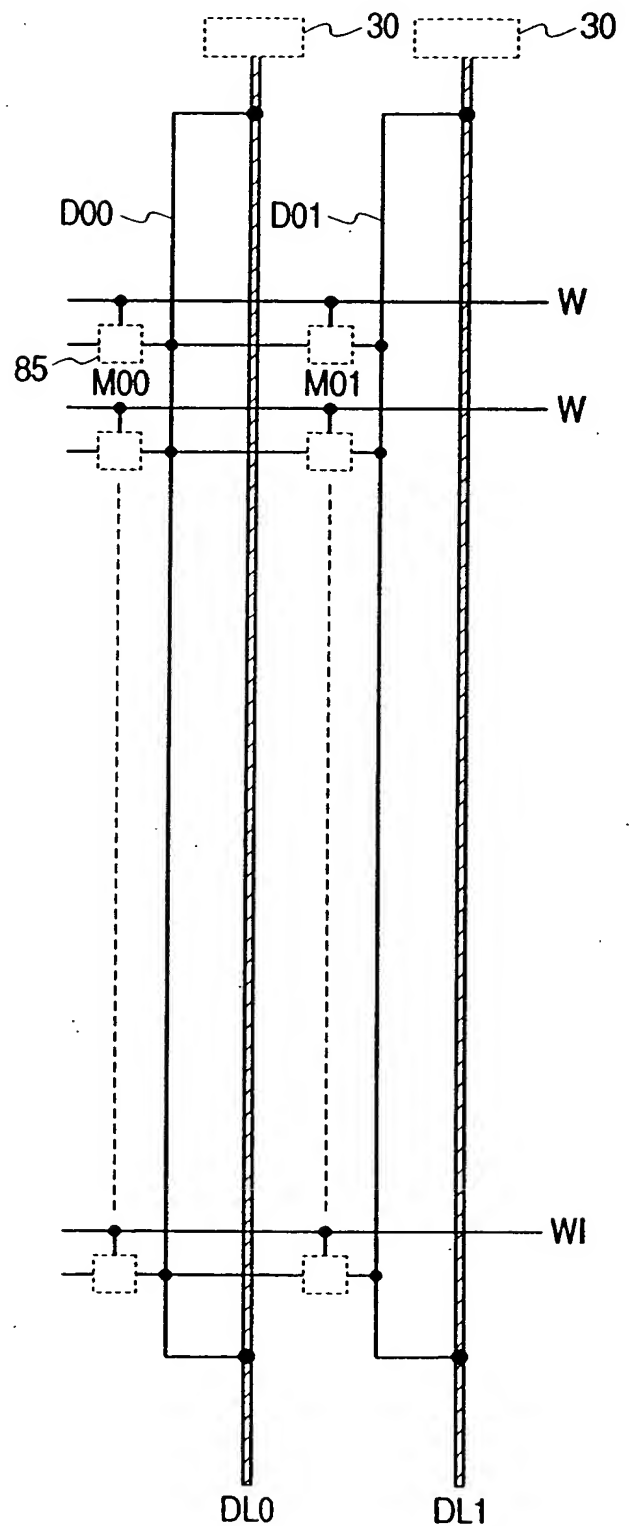


FIG. 53

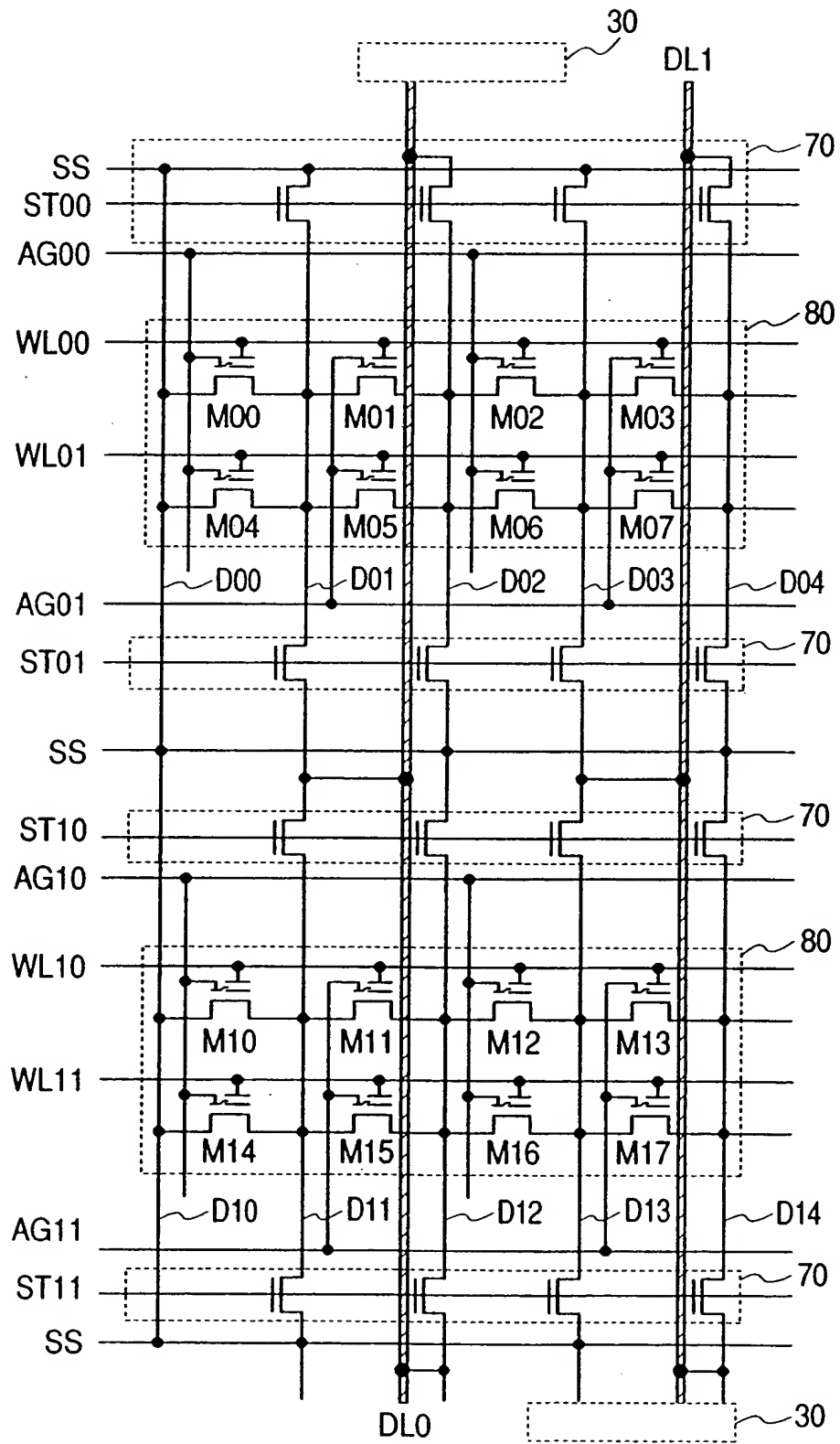
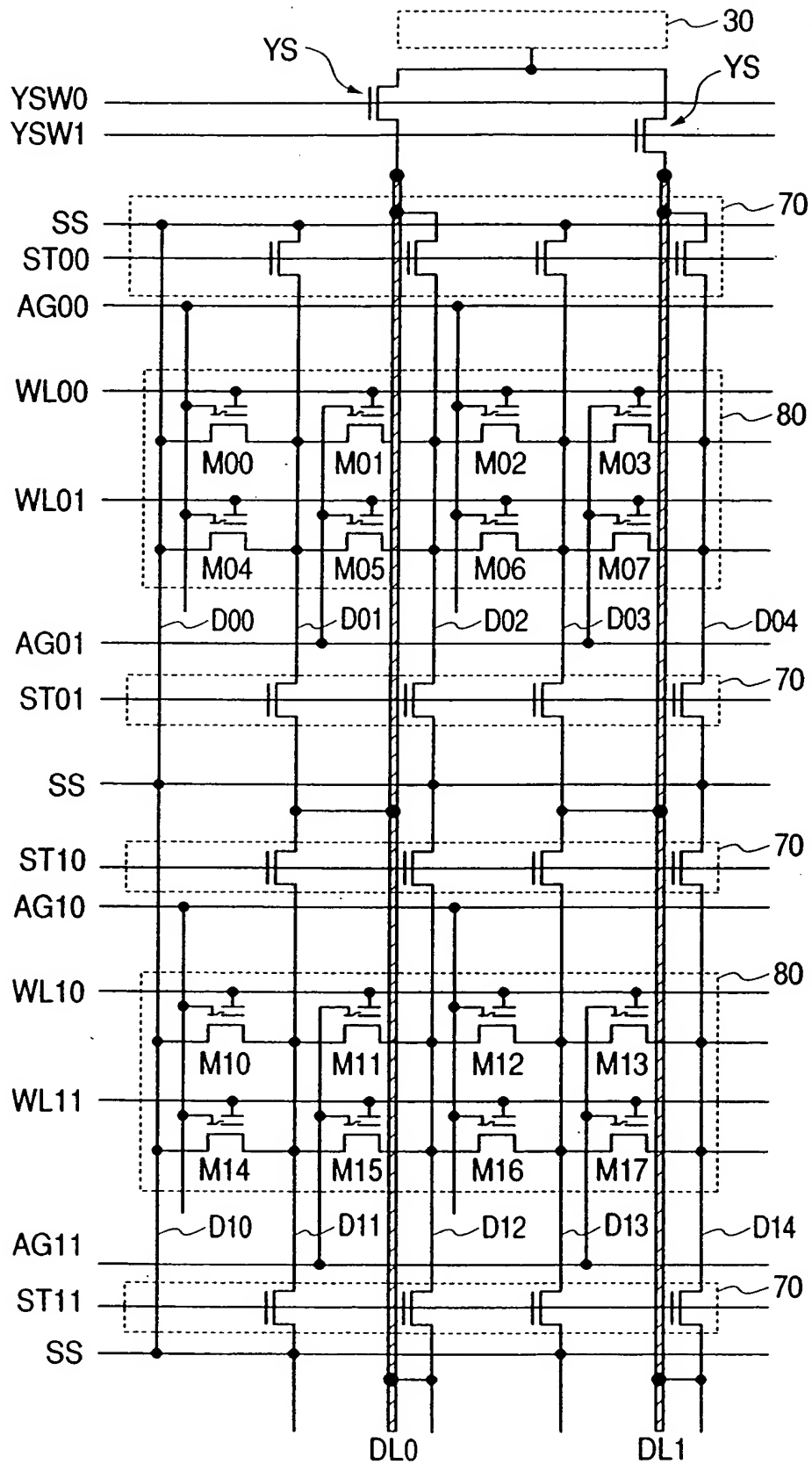


FIG. 54



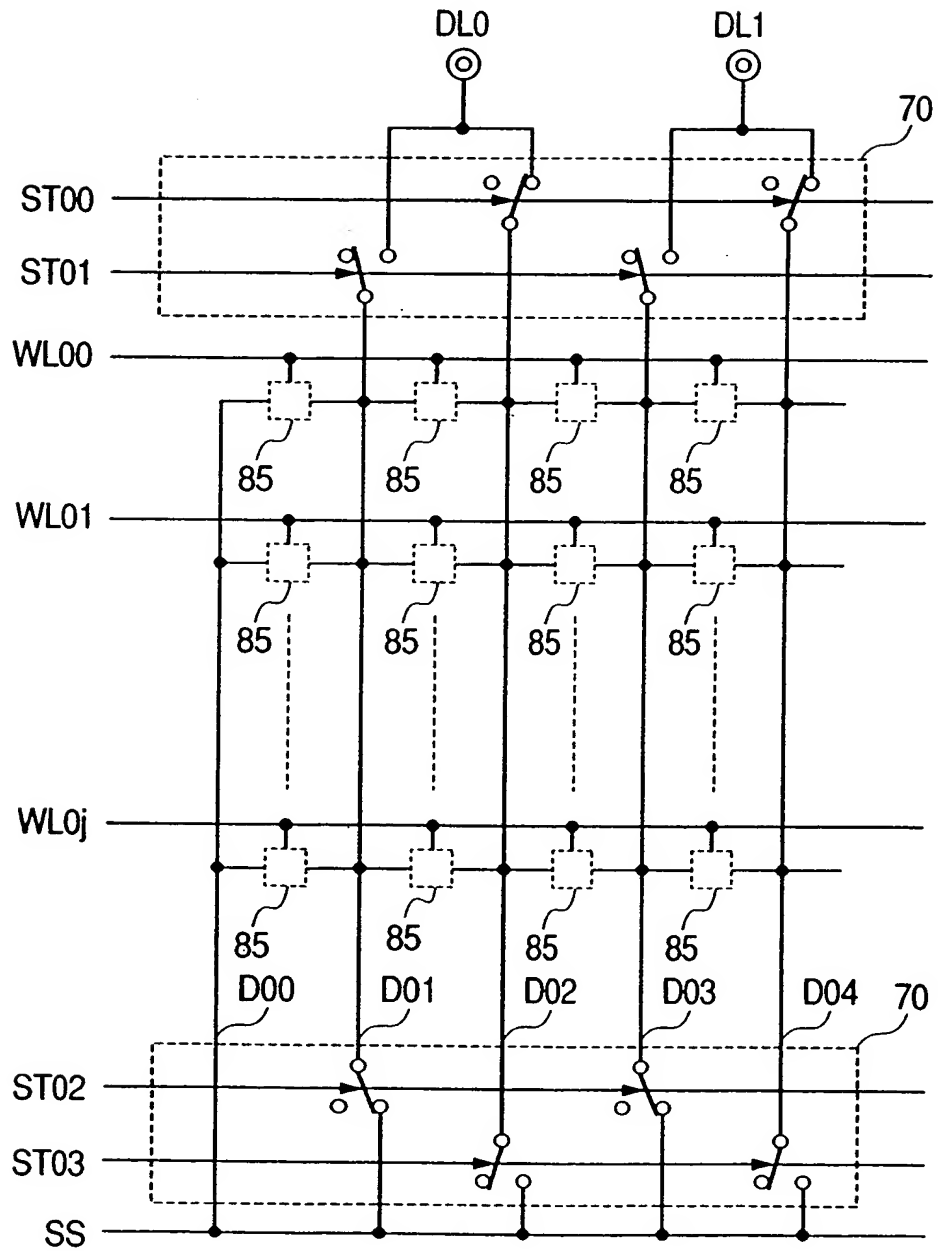
*FIG. 55*

FIG. 56

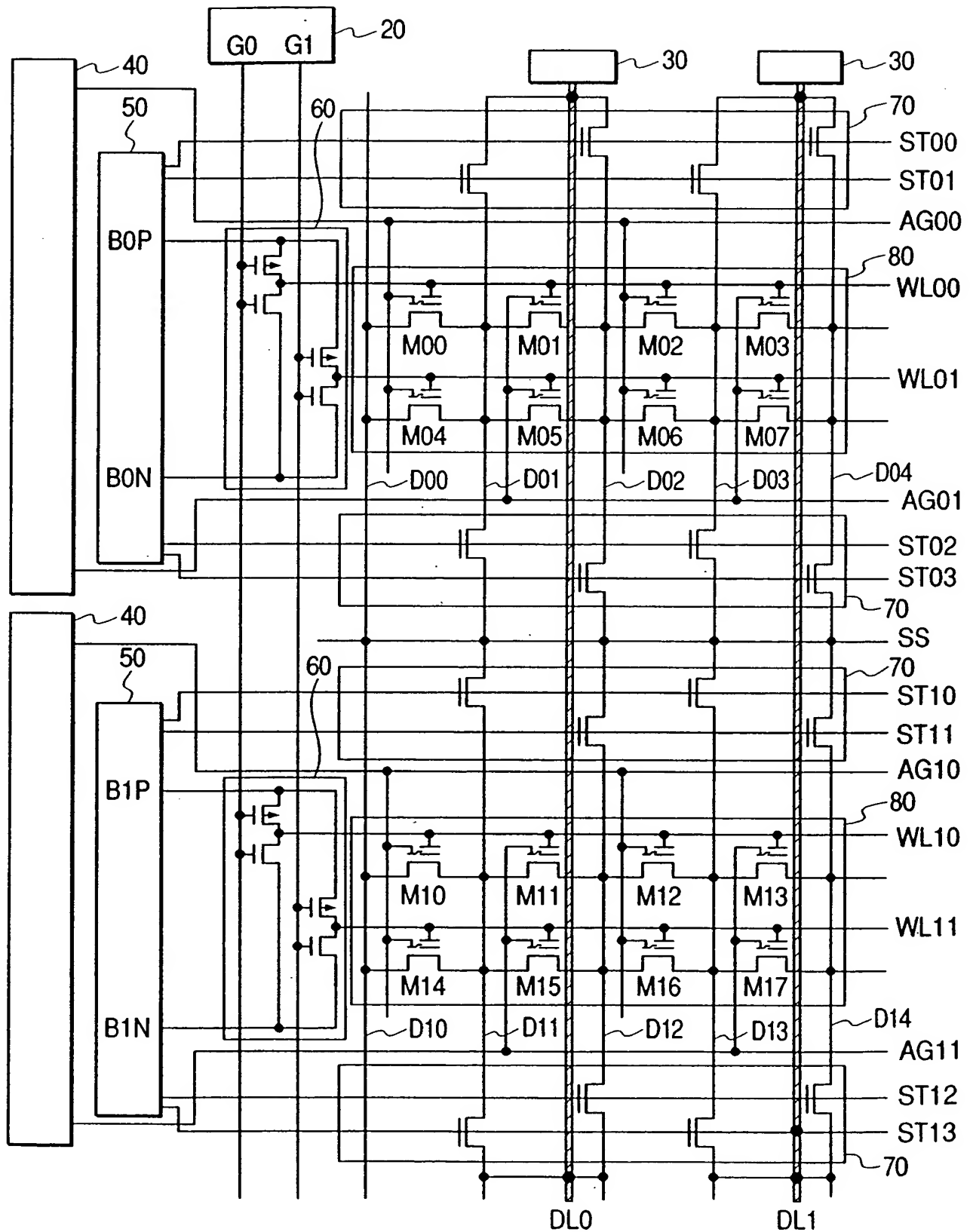
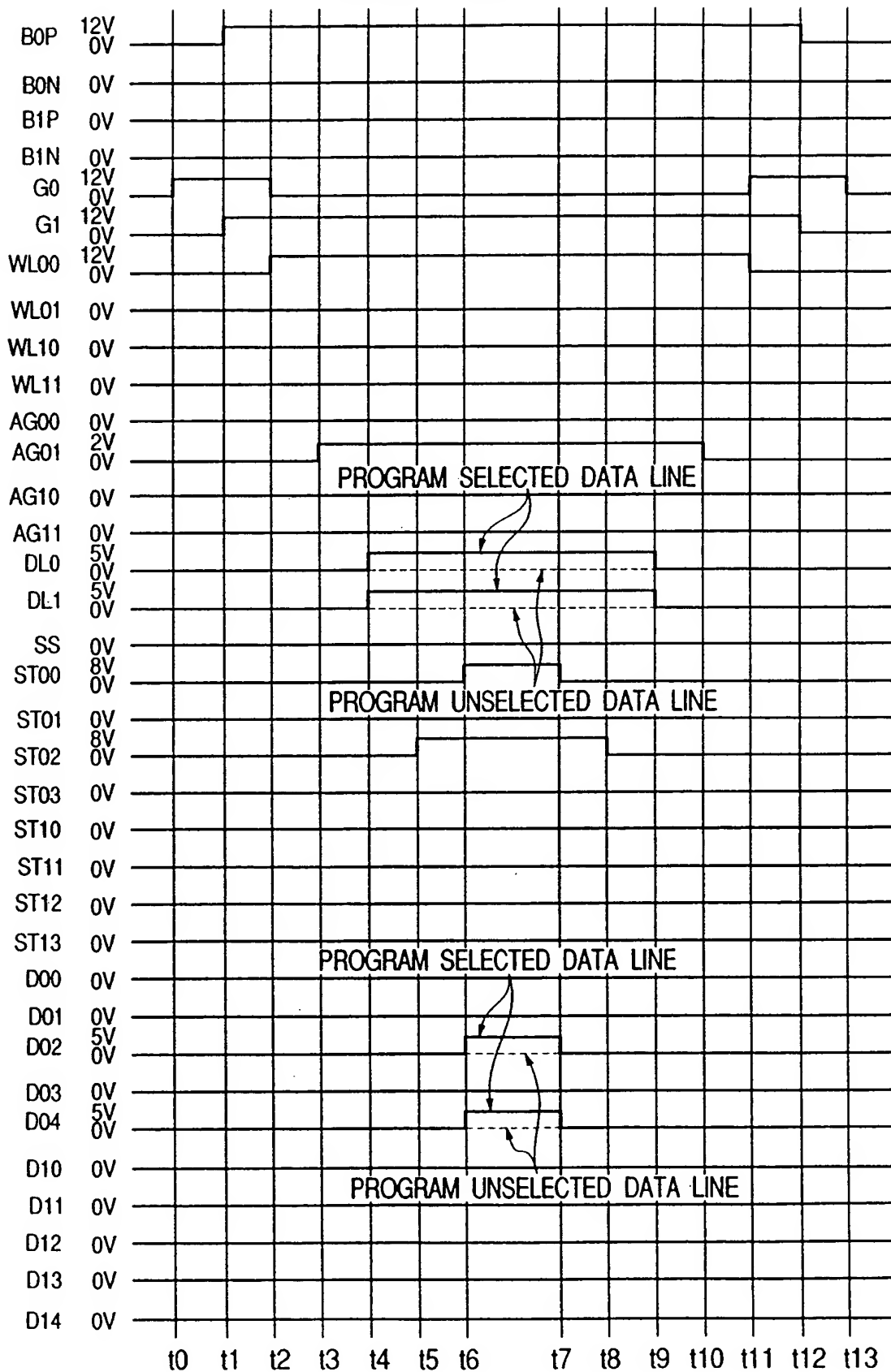
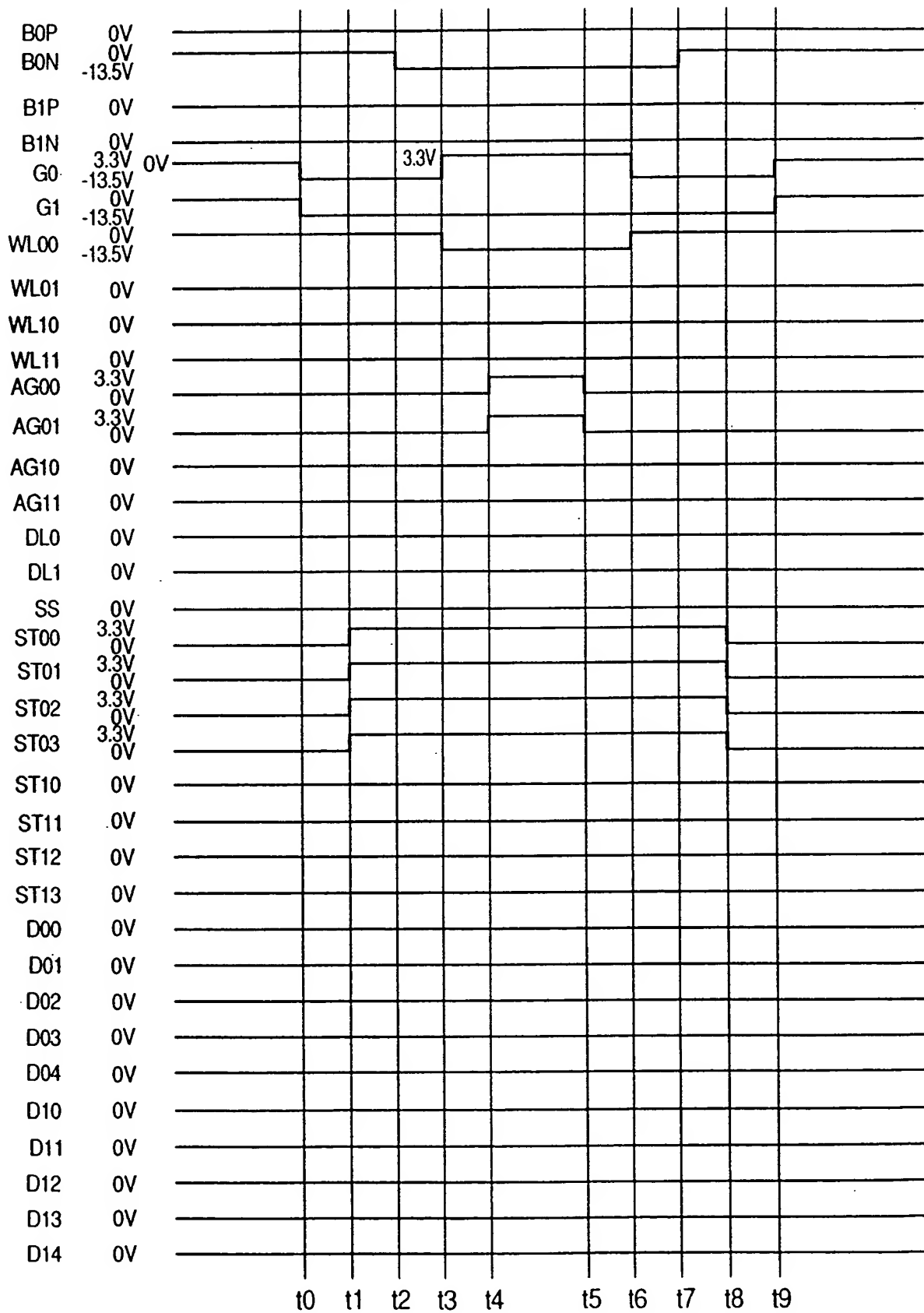




FIG. 57



**FIG. 58**

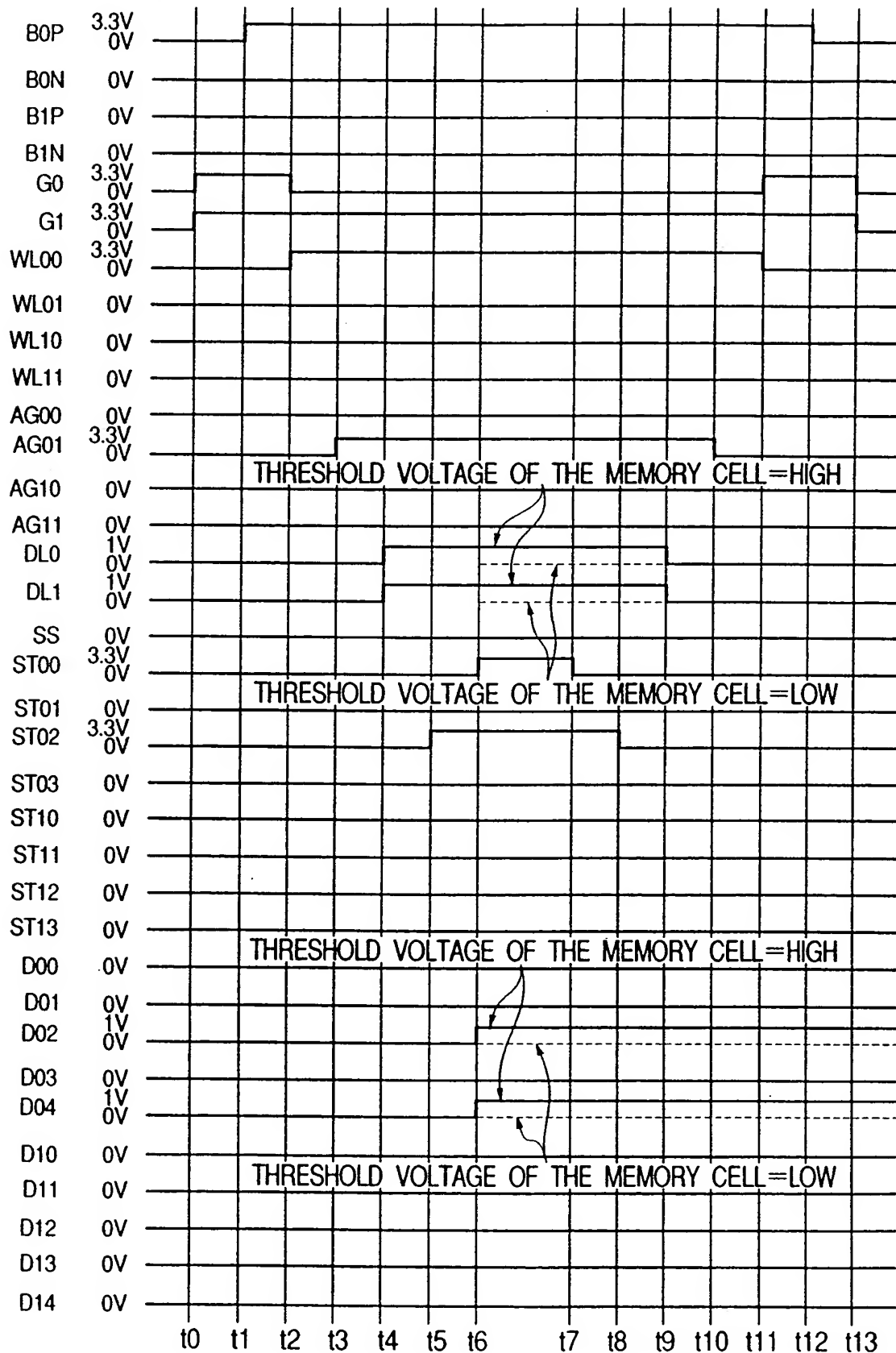
**FIG. 59**

FIG. 60

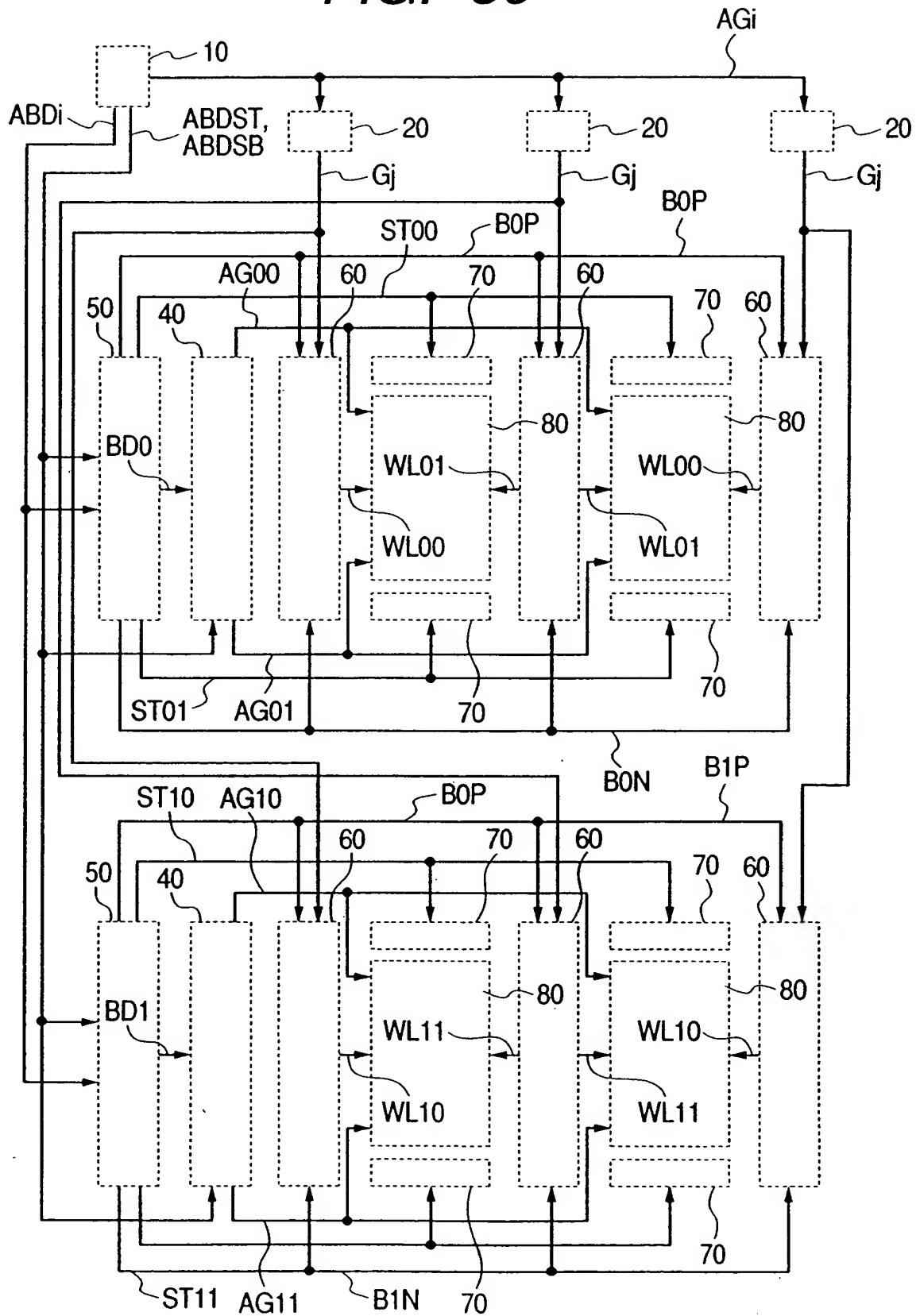


FIG. 61

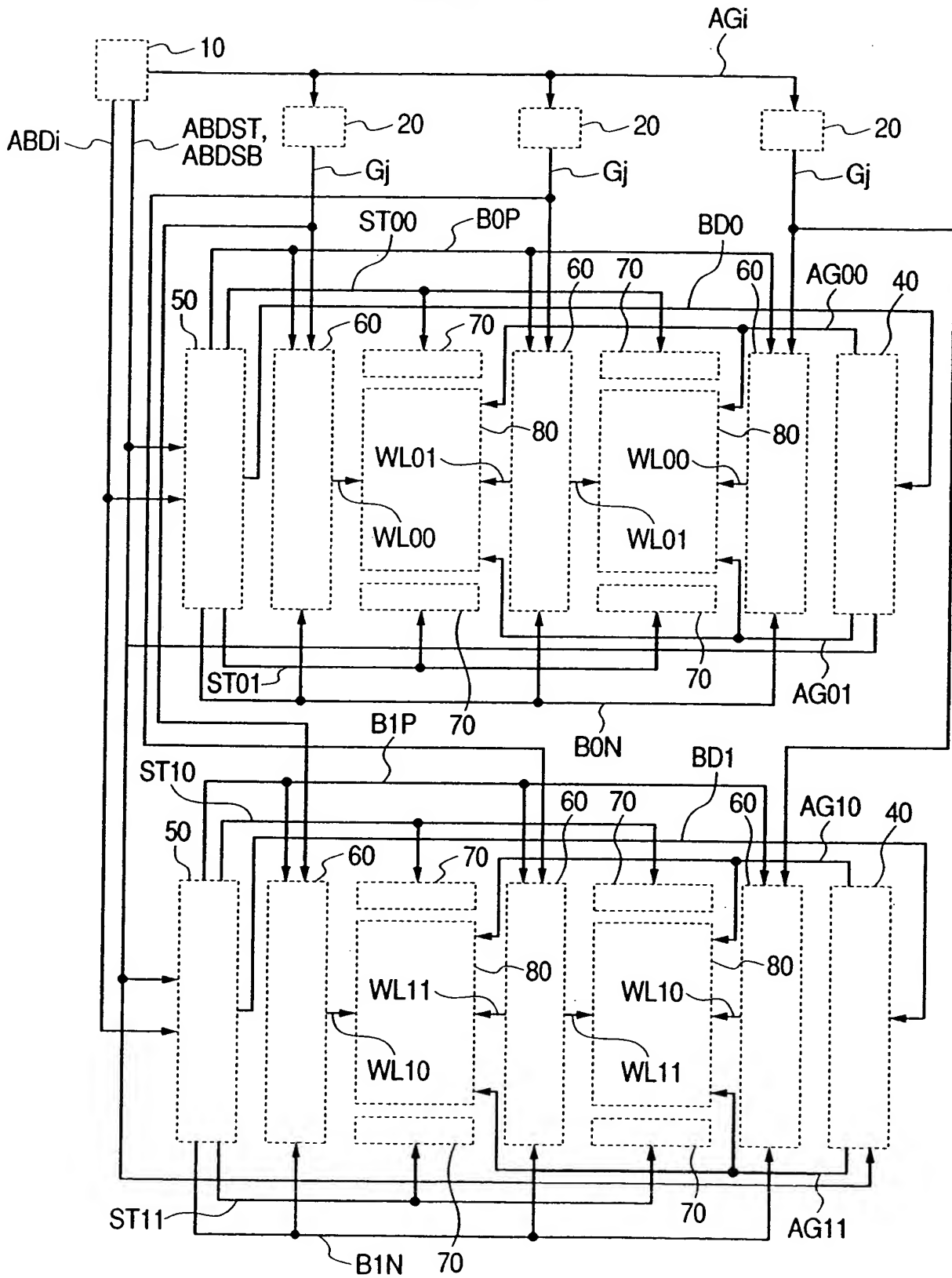


FIG. 62

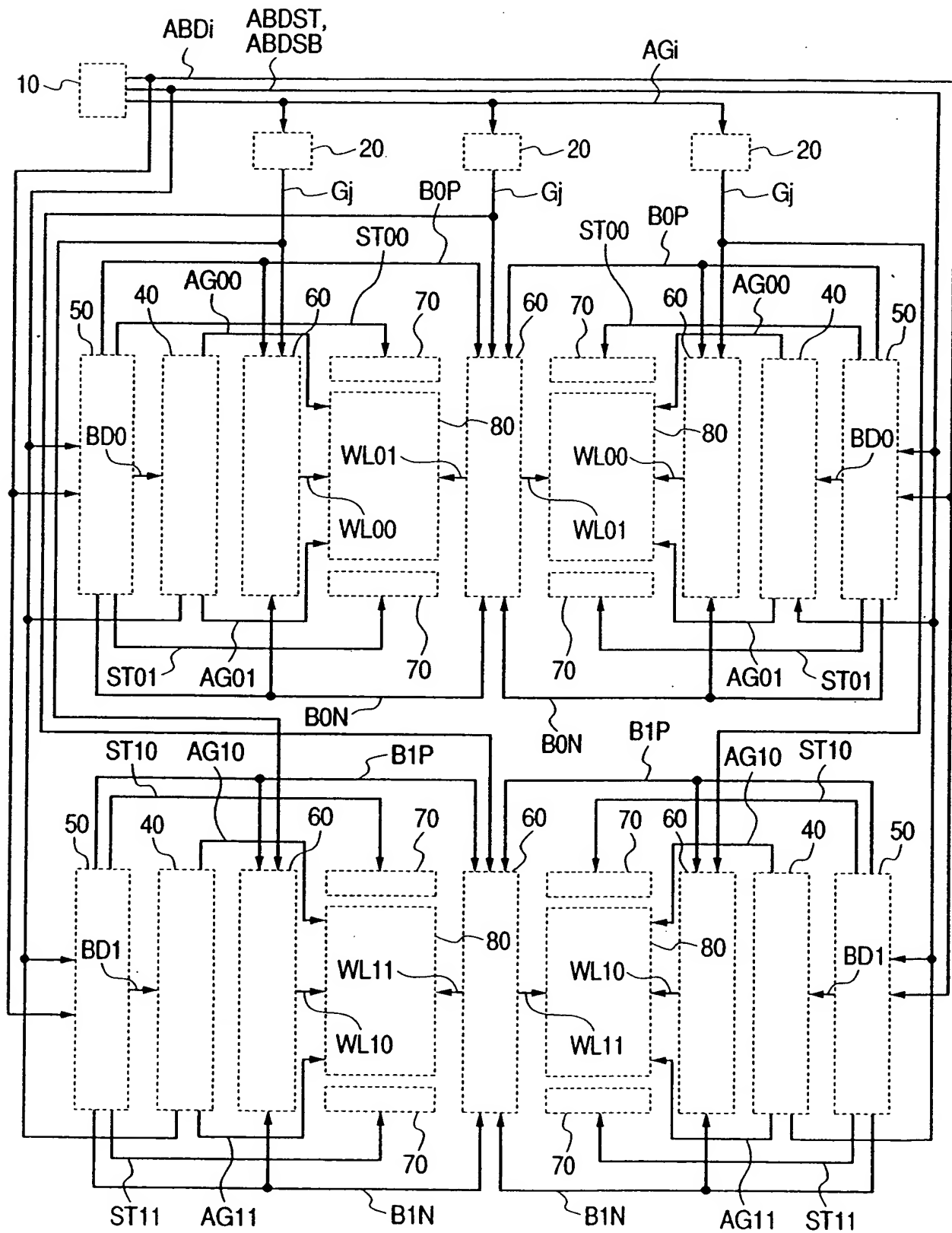


FIG. 63

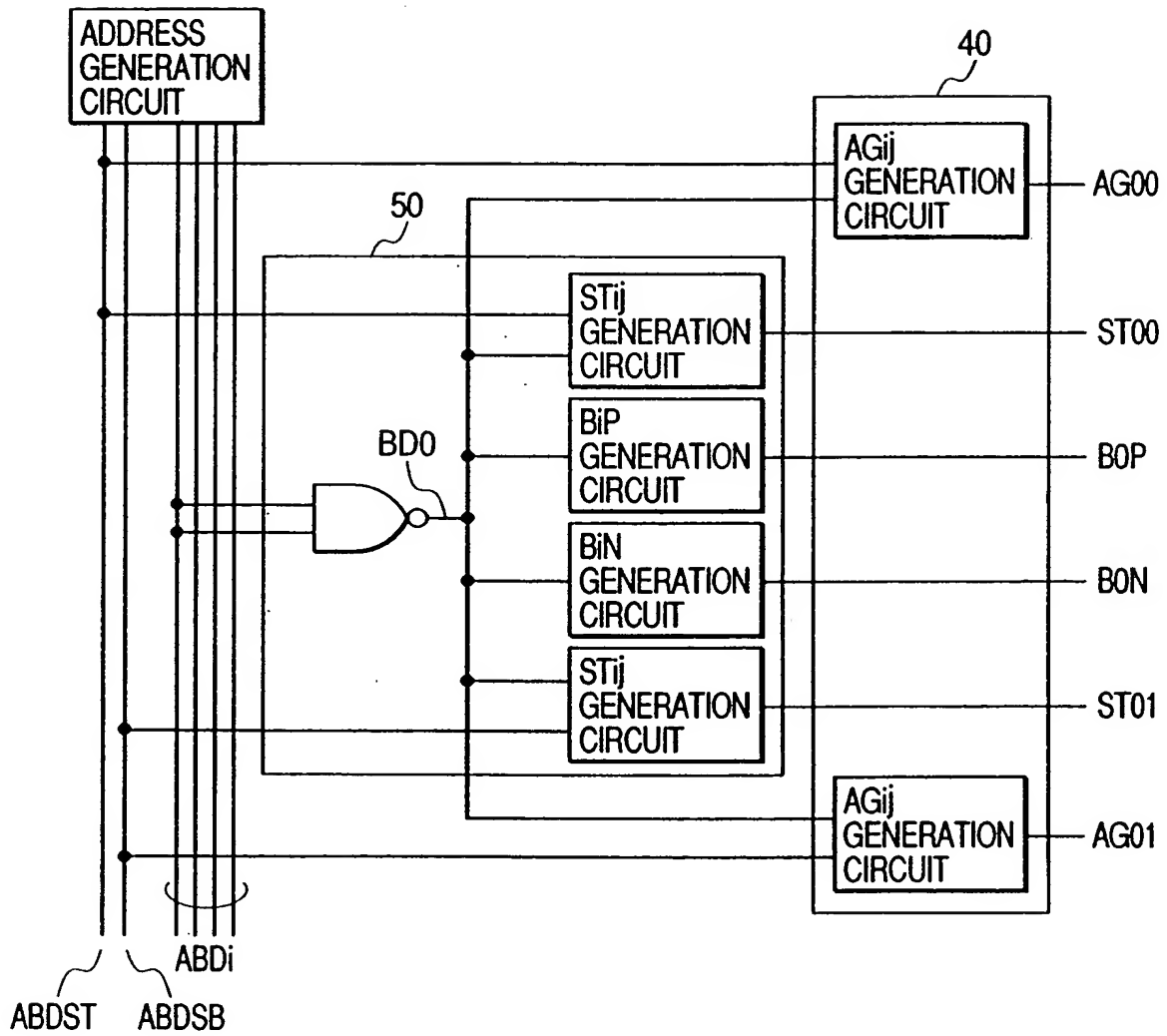


FIG. 64

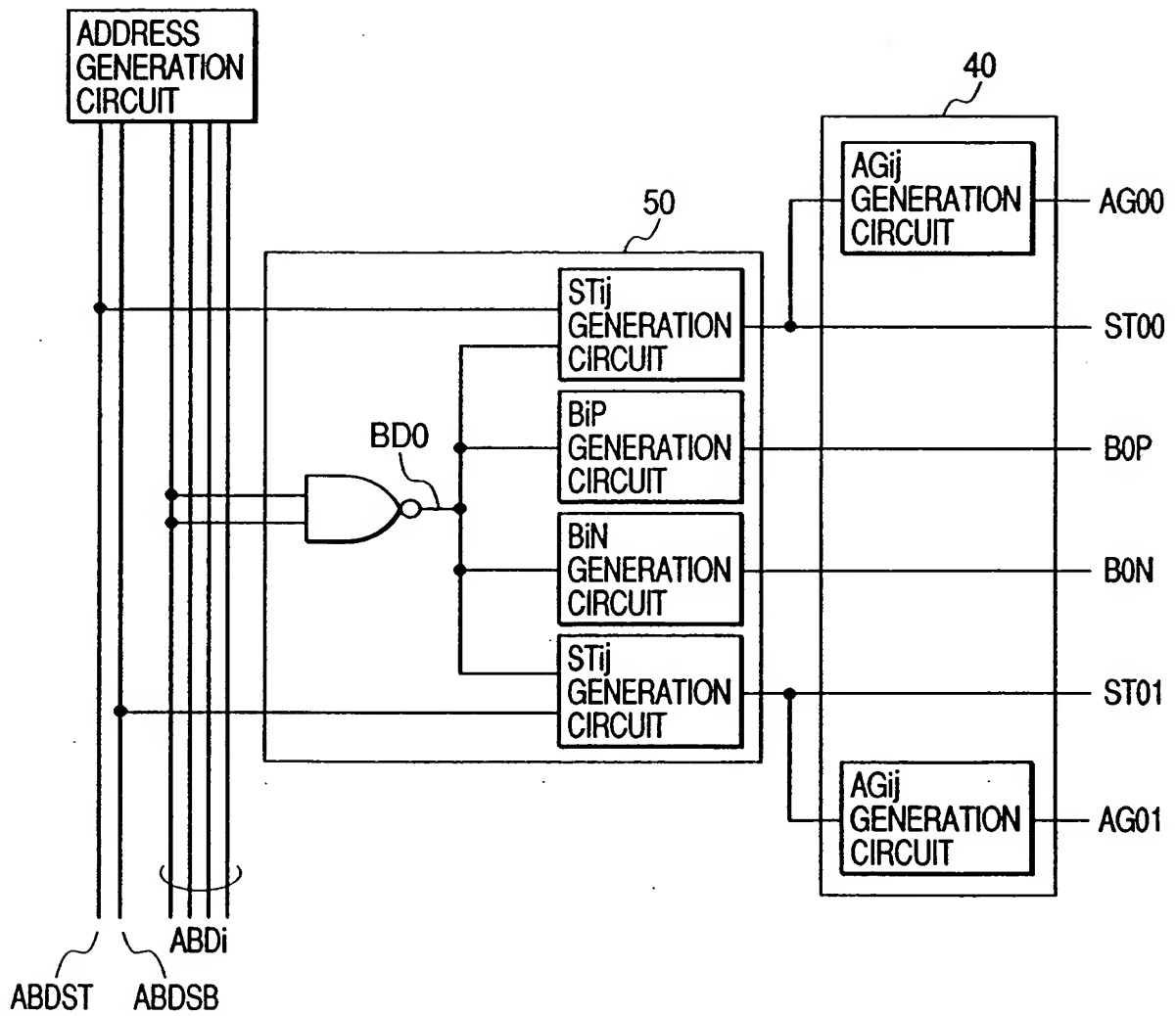




FIG. 65

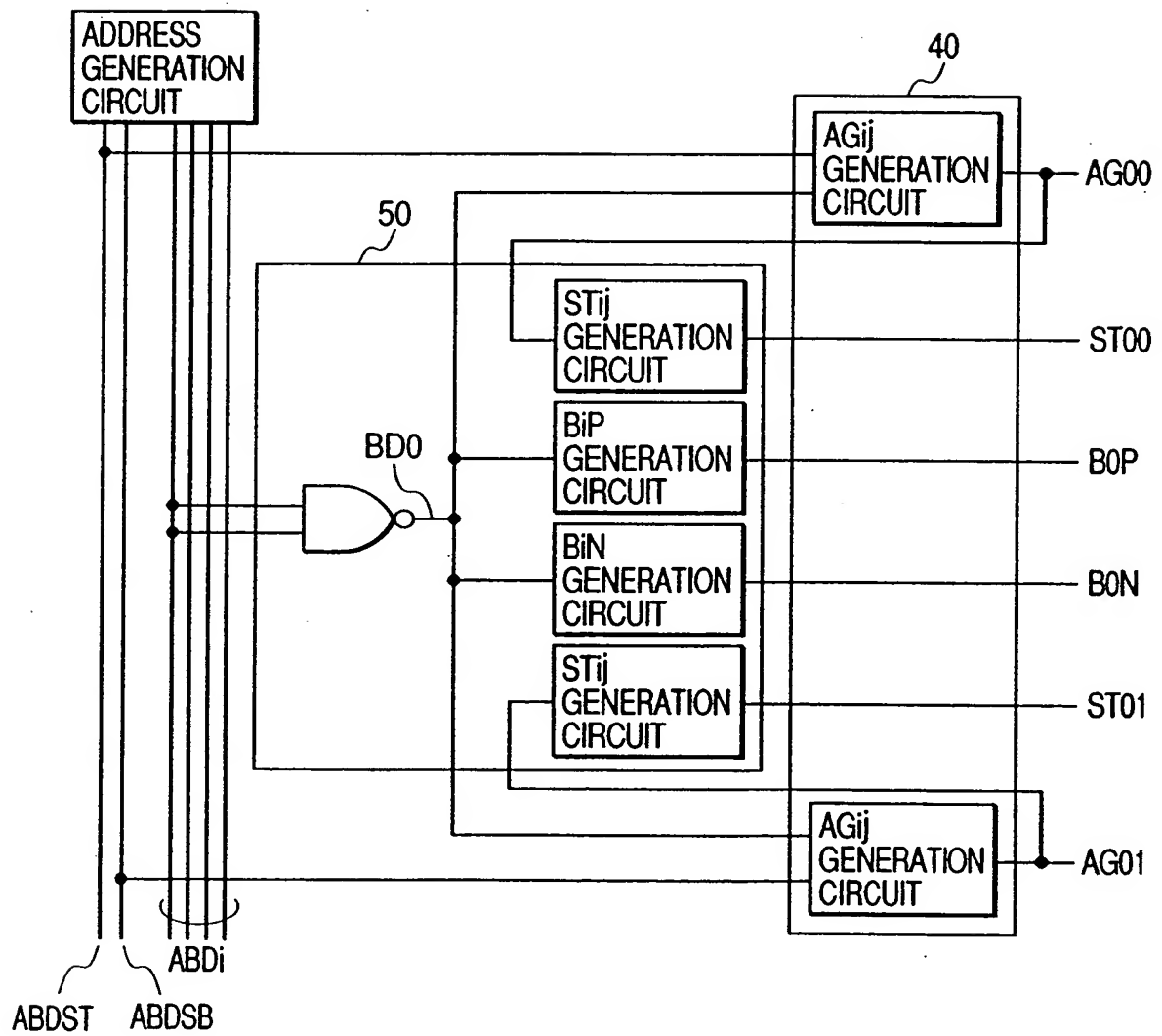


FIG. 66

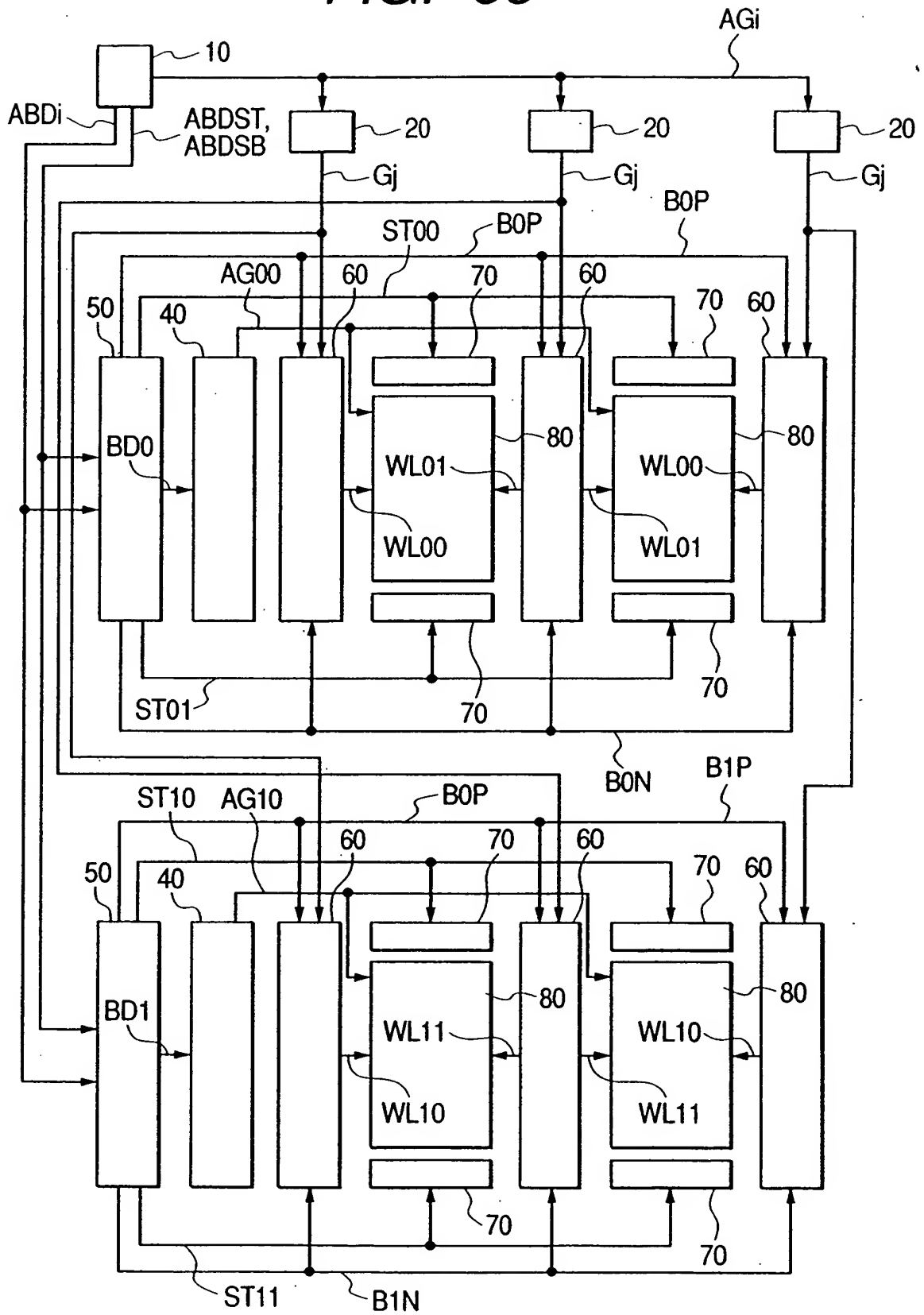


FIG. 67

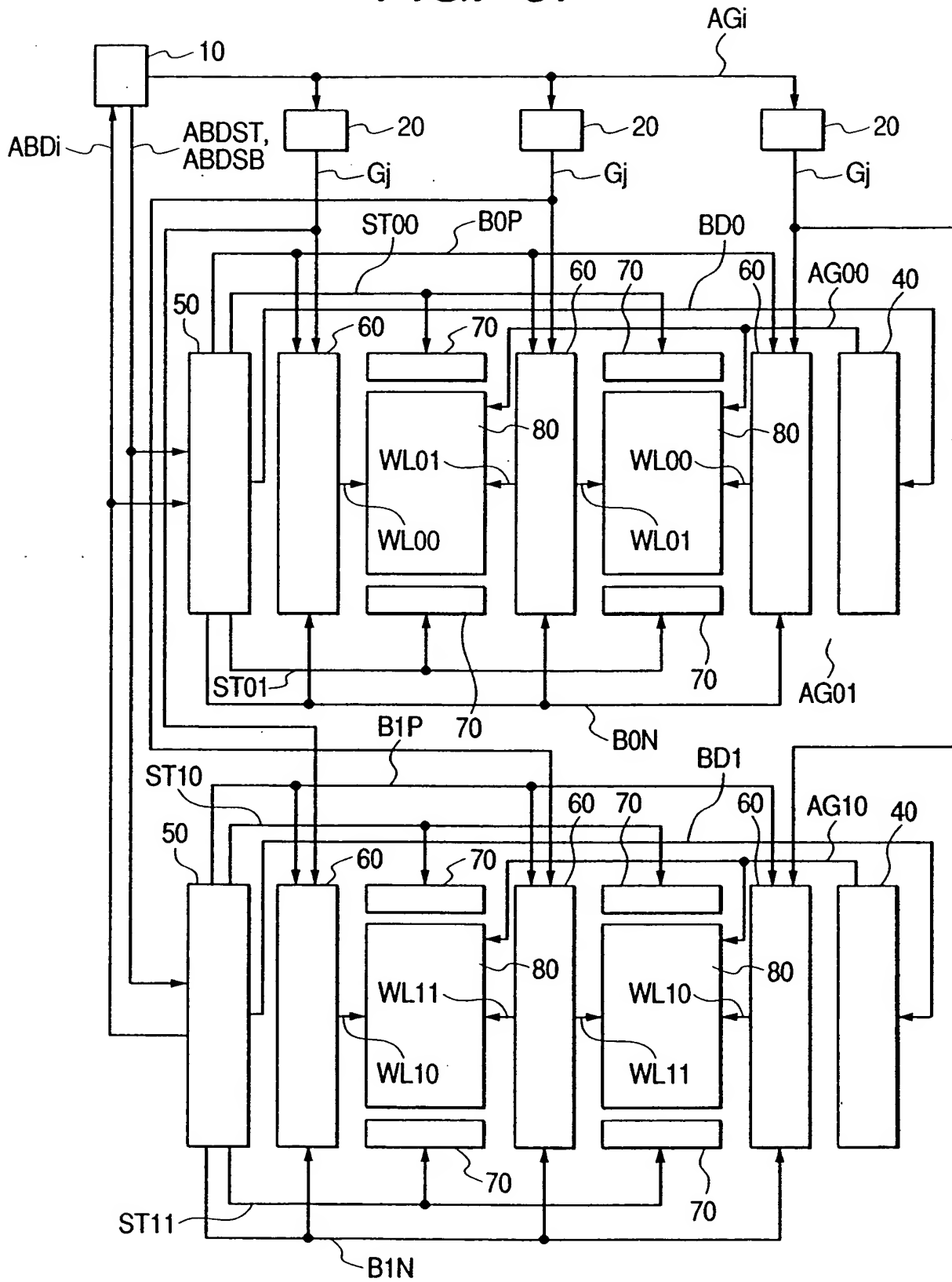


FIG. 68

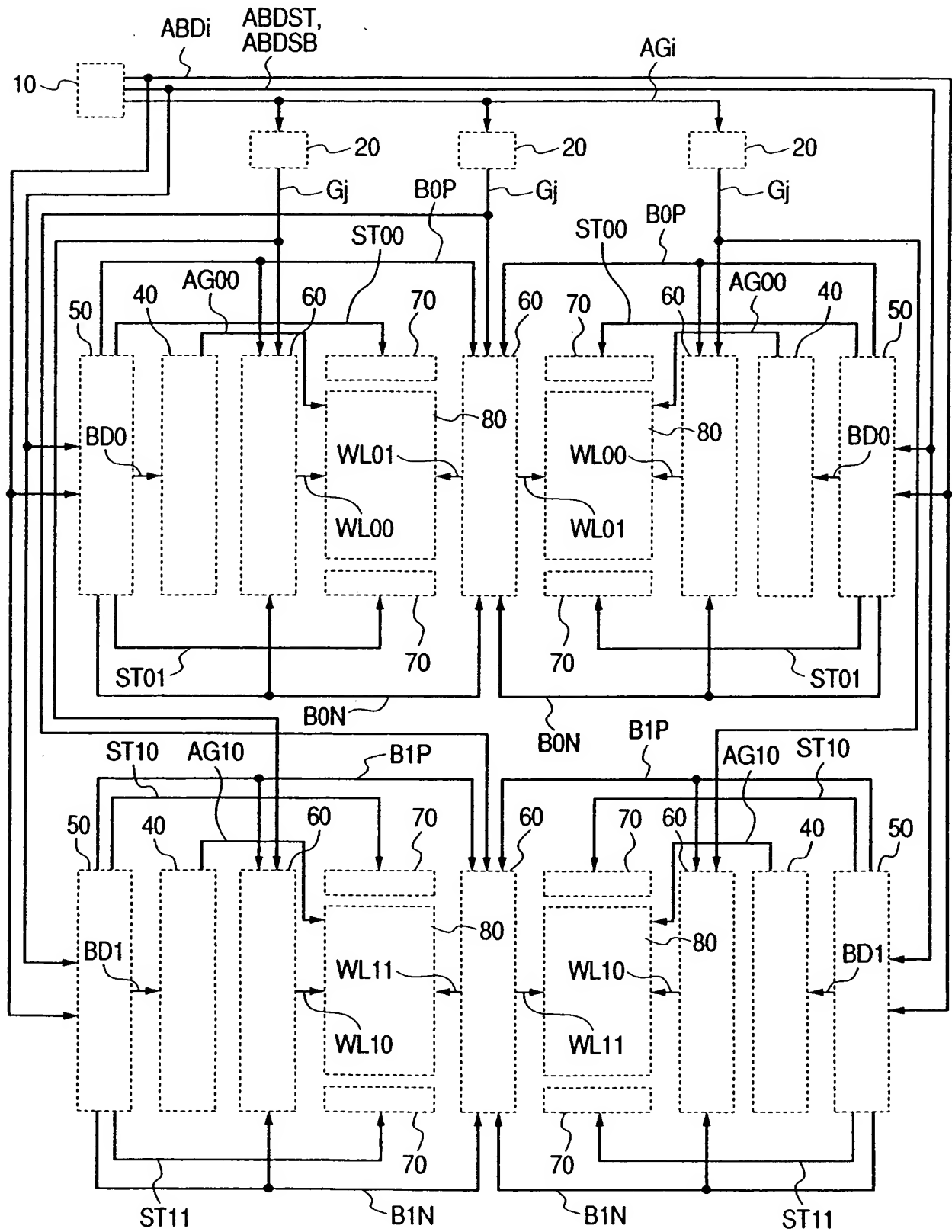


FIG. 69

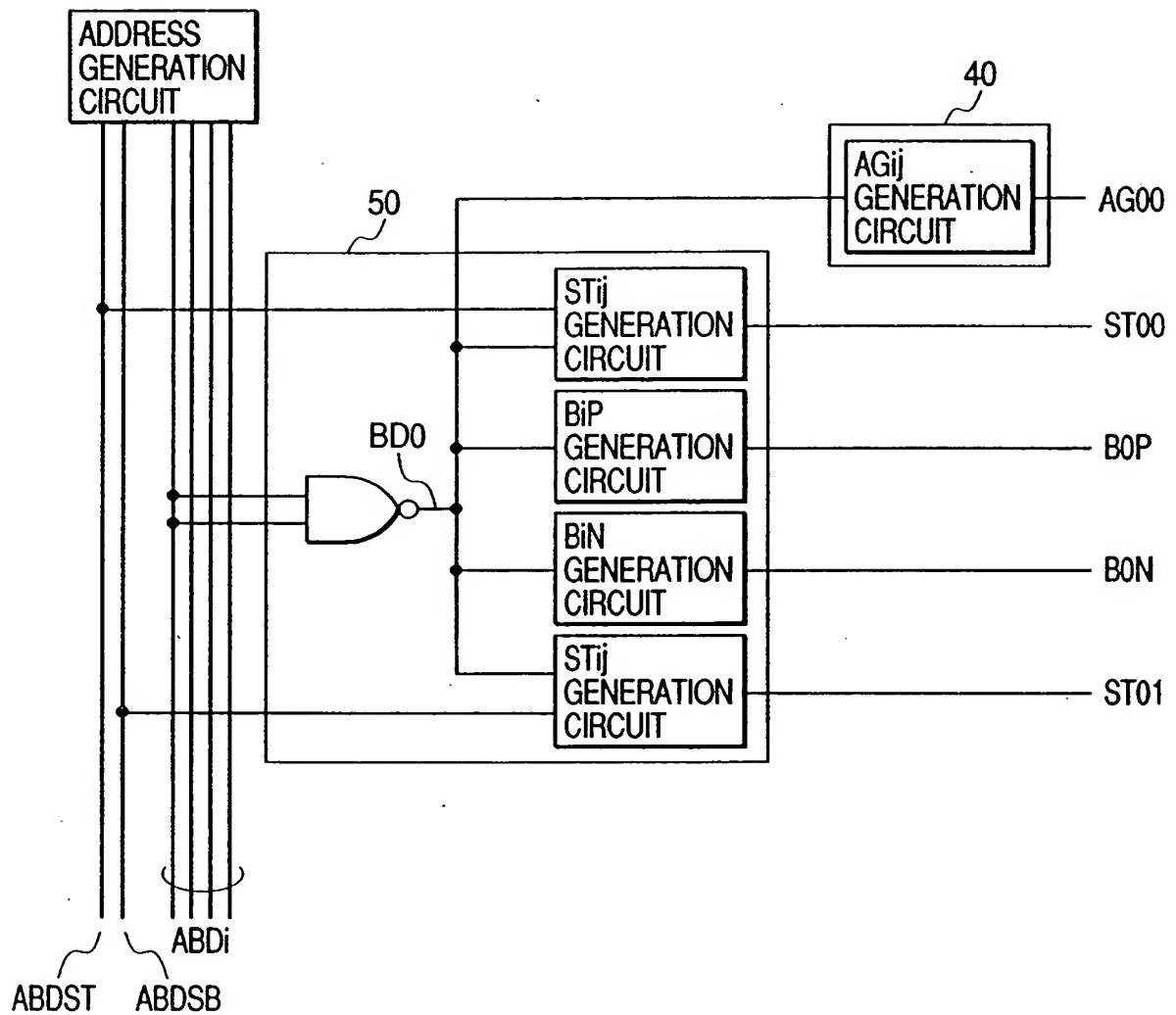


FIG. 70

